NVFEL Laboratory Test Data

Final Laboratory Test Results

CVS

Test Number: 2015-0231-004 Vehicle ID: VW411-4-0167/16

Results	HC-FID (grams)	CO (grams)	NOx (grams)	CO2 (grams)	CH4 (grams)	NMHC (grams)	Meth Response
Phase 1	0.067	1.060	0.065	1028.7	0.020	0.048	1.074
Phase 2	0.000	0.337	0.018	1131.7	0.001	0.000	
Phase 3	0.005	0.416	0.012	894.7	0.006	0.000	

Test Conditions	Phase 1	Phase 2	Phase 3	Phase 4
Barometer (inHg)	29.01	29.02	29.01	
Avg Cell Temp (degF)	75.13	75.09	75.16	
Dew Point (degF)	48.59	48.63	48.55	
Specific Humidity (grains/lbm)	52.37	52.45	52.29	
NOx Corr Factor	0.9039	0.9042	0.9036	
CO2 Dilution Factor	20.379	30.725	23.263	
CFV Vmix (scf @68F)	3234.38	5545.08	3231.03	
CVS Flow Rate Avg (scfm)	382.92	382.46	382.14	

Fan Placement: Other (record in post-test comments)

	Phase 1	Phase 2	Phase 3
Phase Time (secs)	506.81	869.89	507.31
Distance (miles)	3.593	3.858	3.604
Bag Analysis Time (secs)	142.5	142.1	141.5

	FTP B1	FTP B2	FTP B3	FTP-W	MFR
IWR % diff	-2.758	-2.218	-2.049	-2.282	-1.210
ASCR % diff	-0.987	-1.249	-0.860	-1.123	-0.440
EER	-0.915	-2.037	-0.984	-1.467	-0.300

MFR Test Results for Procedure 21 Federal fuel 2-day exhaust (w/can load)

MFR Number	HC	CO	NOx	CO2	NMOG	NonMeth HC	CH4
10036322	0.0094	0.24	0.0122	276	0	0.006	0.0034

Odometer	MPG	PM
5149 M	32.1	0.001

MPG is 0.35 % higher than EPA MPG

MFR Lab: Volksawgen AG

Dyno: 21

Fuel: 61 Tier 2 Cert Gasoline

Cert

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results

Test Number: 2015-0231-003 Vehicle ID: VW411-4-0167/15

Test Information

Test Date:	7/15/2015	MFR Name:	Volkswagen Group of
Key Start:	15:37:35	MFR Codes:	VGA 10015
Fuel Container ID:	F0027N	Config #:	00
Fuel Type:	61 Tier 2 Cert Test Fuel	Transmission:	Auto
Test Procedure:	3 HWFET (hwfetprep_hwfet)	Shift Schedule:	A0EPA0011
FE Calculation Method:	Gasoline	Beginning Odometer:	005354.0 MI
Pretest Remarks:		Drive Schedule:	hwfetwarmup_hwfet
Drive Axle:	FWD		

Bag Data		HC-FID (ppmC)	CO (ppm)	NOx (ppm)	CO2 (%)	CH4 (ppm)	NMHC (ppmC)
Phase 1							
	Sample	2.760	11.902	0.144	1.115	1.872	
	Ambient	2.971	0.598	0.015	0.044	2.002	
	Net Concentration	0.036	11.354	0.131	1.075	0.037	-0.003

Remarks: small fan down on 8" block

Phase 2

Sample	
Ambient	
Net Concentration	

Remarks:

Phase 3

Sample	
Ambient	
Net Concentration	

Remarks:

Phase 4

Sample	
Ambient	
Net Concentration	

Remarks:

Results	HC-FID (gpm)	CO (gpm)	NOx (gpm)	CO2 (gpm)	CH4 (gpm)	NMHC (gpm)	Vol MPG (mpg)
Phase 1	0.000	0.112	0.002	166.6	0.000	0.000	53.712

NMOG=1.04 x NMHC

Fuel Economy	Gasoline MPG
Phase 1	53.54

Dyno Settings		
	Dyno #:	D002
	Inertia:	3625
	EPA Set Co A:	3.94
	EPA Set Co B:	0.1863
	EPA Set Co C:	0.01576
FWD	Emiss-Bench:	D002

NVFEL Laboratory Test Data

Final Laboratory Test Results

CVS

Test Number: 2015-0231-003 Vehicle ID: VW411-4-0167/16

Results

	HC-FID (grams)	CO (grams)	NOx (grams)	CO2 (grams)	CH4 (grams)	NMHC (grams)	Meth Response
Phase 1	0.002	1.153	0.020	1714.4	0.002	0.000	1.074

Test Conditions

	Phase 1	Phase 2	Phase 3	Phase 4
Barometer (inHg)	29.02			
Avg Cell Temp (degF)	75.15			
Dew Point (degF)	48.62			
Specific Humidity (grains/lbm)	52.42			
NOx Corr Factor	0.9041			
CO2 Dilution Factor	12.005			
CFV Vmix (scf @68F)	3079.03			
CVS Flow Rate Avg (scfm)	241.46			

Fan Placement: Other (record in post-test comments)

Phase Time (secs)	765.11
Distance (miles)	10.288
Bag Analysis Time (secs)	143.3

	HWY	MFR
IWR % diff	-1.083	-2.050
ASCR % diff	-0.928	-1.510
EER	-0.420	-0.910

MFR Test Results for Procedure 3 HWFE

MFR Number	HC	CO	NOx	CO2	NMOG	NonMeth HC	CH4
10036323	0.0008	0.087	0.0027	166	0	0.0008	0.0001

Odometer	MPG
5160 M	53.3

MPG is -0.45 % lower than EPA MPG

MFR Lab: Volksawgen AG

Dyno: 21

Fuel: 61 Tier 2 Cert Gasoline

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 7/16/2015 8:27:01 PM
Subject: DAILY: Magna's $1.9B deal for Getrag | Ford dangles $10K discounts on new F-150 | Honda used airbag inflators made by ARC | VW to return to Iran?

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Ford dangles $10K discounts on aluminum F-150

July 16, 2015

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Magna agrees to buy Getrag for $1.9 billion to expand in transmissions

Canada's Magna International agreed to buy German manufacturer Getrag for $1.9 billion, gaining control of one of the largest independent producers of vehicle transmissions.

Ford dangles $10K discounts on aluminum F-150

Ford has begun offering discounts that can exceed $10,000 on its new aluminum-bodied F-150 pickup, which has been losing sales and market share this year as the automaker works to build inventory on dealer lots.

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Chevy Silverado styling toughened up for 2016
Inside the AutoNation-TrueCar divorce

Advertisement

Honda used airbag inflators made by ARC as probe widens

Honda, the automaker worst affected by the global safety crisis involving defective airbags, said it had used inflators made by a second company under investigation in the U.S. for suspected flaws.

Chrysler eases midsize car incentive war

What's driving the shift to crossovers

Nissan will boost Rogue output by 100K units, add 2 variants

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VW, others explore return to Iran after nuclear sanctions lift

Volkswagen and other European automakers have taken the first steps to entering Iran after the Islamic Republic's nuclear accord with the West pointed to an easing of economic sanctions that have prevented carmakers from doing business in the country.

China's Yanfeng plans $55 million Tennessee factory to supply VW

Yanfeng Automotive Interiors, a Chinese supplier, will build a $55 million factory in Chattanooga to supply components to Volkswagen AG's nearby assembly plant.

Ghosn pledges to boost Nissan's Japan production

Mazda CX-3 to start at $19,960, joining the new $20,000 club

Michigan driverless car testing site opens Monday

Senate panel reverses course on rentals of recalled vehicles

Tesla to sell Model X in China in first half of 2016

GM case judge says customers can't see U.S. probe data

Dodge's Morse code message: Engage

The one man who could make Piech snap to attention

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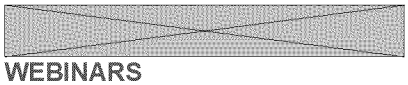
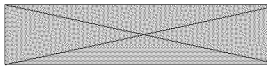


WEBINARS
» July 21 at 2pm ET - Social Advertising by Digital Air Strike
» July 29 at 2pm ET - Fighting Fraud



» Oct. 14 - Best Dealerships To Work For
» Jan. 12 - Automotive News World Congress

by Bank of America Merrill Lynch
» Aug. 6 at 2pm ET - New Strategies for Retail
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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 7/17/2015 12:55:02 PM
Subject: A.M. NEWSCAST: GM, VW face headwinds in China; Barclays downgrades sector | Nissan battery hunt? | Fate of Land Rover Defender | Safety pioneer dies | Supplier skill shortage

July 17, 2015

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TOP STORY: China woes hit GM, VW

Nissan on battery hunt? »

Supplier skill shortage »

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From: News
Sent: Fri 7/17/2015 1:07:51 PM
Subject: VW, GM shudder as China profit engine sputters
MAIL_CONVERSATION_TOPIC: VW, GM shudder as China profit engine sputters
Created: Fri 3/18/2016 6:18:45 PM

Shockwaves from a drop in Chinese car demand are reverberating in Wolfsburg, Germany and Detroit, Michigan, where VW (VOWG_p.DE) and General Motors (GM.N) are feeling the effects of a slowdown in a market that has been their big profit engine.

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From: News
Sent: Fri 7/17/2015 1:09:20 PM
Subject: VW, GM shudder as China profit engine sputters
MAIL_CONVERSATION_TOPIC: VW, GM shudder as China profit engine sputters
Created: Fri 6/17/2016 4:29:43 PM

Shockwaves from a drop in Chinese car demand are reverberating in Wolfsburg, Germany and Detroit, Michigan, where VW (VOWG_p.DE) and General Motors (GM.N) are feeling the effects of a slowdown in a market that has been their big profit engine.

View article...

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Gordinier, Terry[Gordinier.Terry@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Rodgers, William (EEO)
Sent: Fri 7/17/2015 1:30:08 PM
Subject: RE: VW370 40145/16

Hello Jim,

We are requesting a retest for the Highway cycle for Vehicle ID: VW370 40145/16, a 2016 Golf TDI configured as a Jetta Sedan. This decision is based on the official EPA rounded adjusted fuel economy of 64.4 MPG Highway found in Verify which is 3.2% below the Volkswagen test result of 66.5 MPG.

We are asking that this test be reschedule as soon as possible because of a short lead time to product launch. Please let us know the test date as soon as possible.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Thursday, July 16, 2015 11:56 AM
To: Allen, Gregory (EEO); Rodgers, William (EEO)
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW370 40145/16

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Good, David[good.david@epa.gov]
From: Ex. 6
Sent: Fri 7/17/2015 2:04:54 PM
Subject: RE: 2016 Inactive Fuel Economy Labels Volkswagen (HLP-6426)

Hello Mr. Thomas,

The database update has been completed. These 4 2016 fuel economy label model type indexes (010, 024, 073, 075) have been made inactive.

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

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To verifyhelp@csc.com

cc

Ex. 6 USA/CSC

Subject RE: 2016 Inactive Fuel Economy Labels Volkswagen Link

07/16/2015 12:28 PM

From: "Good, David" <good.david@epa.gov>
To: Ex. 6 USA/CSC@CSC
Cc: "Thomas, Richard (EEO)" <Richard.Thomas@vw.com>, "Danzeisen, Karen" <Danzeisen.Karen@epa.gov>
Date: 07/16/2015 09:12 AM
Subject: RE: 2016 Inactive Fuel Economy Labels Volkswagen

Ex. 6

I agree with Richard's request for two more labels----you have my approval to make those indexes inactive when you get a chance. That will make a total of 4 indexes to make inactive.

Thanks

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, July 16, 2015 8:56 AM
To: [Ex. 6]@csc.com)
Cc: Good, David
Subject: 2016 Inactive Fuel Economy Labels Volkswagen

Hi [Ex. 6]

I have two more 2016 labels that need to change to inactive status in Verify. Volkswagen cancelled the manual 5-speed transmission for the 1.8L Jetta and 1.8L Passat, VGA label indexes #073 and #075 respectively. Please make these two 2016 label indexes inactive.

Best regards,
Richard

Richard E. Thomas
Senior Emission Certification Specialist
Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Phone: 248 754 4213
Fax: 248 754 4207
mailto: Richard.Thomas@VW.com

To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Gordinier, Terry[Gordinier.Terry@epa.gov]
From: Rodgers, William (EEO)
Sent: Fri 7/17/2015 2:26:03 PM
Subject: RE: VW411-4-0167-16

Hello Vince,

Please release the VW Passat referenced above for pick up. No further testing is allowed or requested.

Thanks

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Thursday, July 16, 2015 2:29 PM
To: Allen, Gregory (EEO); Rodgers, William (EEO)
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW411-4-0167-16

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Rodgers, William (EEO)[William.Rodgers@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Wilson, Dale[Wilson.Dale@epa.gov]
From: Mazaitis, Vincent
Sent: Fri 7/17/2015 2:33:34 PM
Subject: RE: VW411-4-0167-16

Will do Bill.

If you pick this vehicle up today, please contact Dale Wilson (734)214-4226, in the lab.

Thanks Bill and have a nice weekend!

Vince Mazaitis

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Friday, July 17, 2015 10:26 AM
To: Mazaitis, Vincent; Allen, Gregory (EEO)
Cc: Snyder, Jim; Gordinier, Terry
Subject: RE: VW411-4-0167-16

Hello Vince,

Please release the VW Passat referenced above for pick up. No further testing is allowed or requested.

Thanks

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Thursday, July 16, 2015 2:29 PM
To: Allen, Gregory (EEO); Rodgers, William (EEO)
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW411-4-0167-16

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Giles, Michael (EEO)
Sent: Fri 7/17/2015 3:24:52 PM
Subject: VW Group - Certificate Request for MY2016 Jetta Hybrid - Carryover Test Group GVGV01.4VPA

Hello Jim,

The application and certificate request for the MY2016 Jetta Hybrid (Carryover Test Group GVGV01.4VPA) was submitted today.

Please let me know if there are any related questions when processing this request.

Regards,

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

mailto: Michael.Giles@VW.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 7/17/2015 8:31:01 PM
Subject: DAILY: Google self-driving car rear-ended | More on Tesla's 'Ludicrous Mode' option | China profit engine sputters | FCA, VW, GM lead quality survey

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Google self-driving car was rear-ended July 1, causing minor injuries

One of Google's self-driving cars was involved in an accident early in July, in which three people were injured when a vehicle equipped with Google technology was rear-ended by another vehicle, the company said.

Tesla Model S option offers 'Ludicrous' 0-to-60 time of 2.8 seconds

Tesla Motors, channeling a moment from the Mel Brooks comedy

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Chevy Silverado styling toughened up for

Advertisement

VW, GM shudder as China profit engine sputters

"Speedbaby" announced a $10,000 price cut on its newest Model S variant that runs zero to 60 in a face-stretching 2.6 seconds -- a feature Tesla calls "Ludicrous Mode." That compares with 3.

Shock waves from a drop in Chinese car demand are reverberating in Wolfsburg and Detroit, where Volkswagen and GM are feeling the effects of a slowdown in a market that has been their big profit engine.

2016 Ford dangles $10K discounts on aluminum F-150
Toyota taps GoPro to defend truck turf against new GM pickups
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Friedman to leave NHTSA after serving as interim boss

FCA, VW, GM lead Strategic Vision quality survey

David Friedman, deputy administrator of NHTSA and its interim leader during the 2014 General Motors recall crisis, is leaving his position, the agency confirmed today.

U.S. customers are happiest with vehicles from Fiat Chrysler Automobiles, Volkswagen and General Motors, according to a survey of new car and light-truck buyers.

Former GM researcher, auto safety expert Donald Friedman dies at 88

Ferrari recalls 814 supercars for improper airbag installations

BLOG: CHAD HALCOM

Is the DOJ auto parts price-fixing crackdown winding down?

Opel will shorten hours at two German plants

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Autoliv agrees to buy M/A COM automotive tech unit for $100 million

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Land Rover extends Defender output

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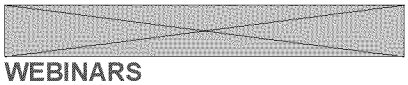

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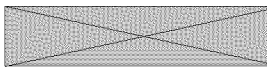

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From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Fri 7/17/2015 10:05:33 PM
Subject: Audi vs. BMW vs. Mercedes-Benz in the Modern Era
MAIL_CONVERSATION_TOPIC: Audi vs. BMW vs. Mercedes-Benz in the Modern Era
Created: Fri 3/18/2016 6:18:33 PM

The Audi, BMW, and Mercedes-Benz brands have become more homogeneous as they've grown their product lineups, and that's not a good thing.

View article...

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: The Hill
Sent: Mon 7/20/2015 12:11:51 PM
Subject: News from The Hill: Republicans fret 'midnight regulations' from Obama

News from The Hill

Republicans fret 'midnight regulations' from Obama

By Tim Devaney

Republicans are sounding the alarm about a deluge of "midnight regulations" that could be pushed through agency pipelines the waning days of the Obama administration.

It has become increasingly common for outgoing presidents to preside over late-term bursts of rules, as they look to cement their marks on Washington and accomplish remaining policy goals before they exit the White House.

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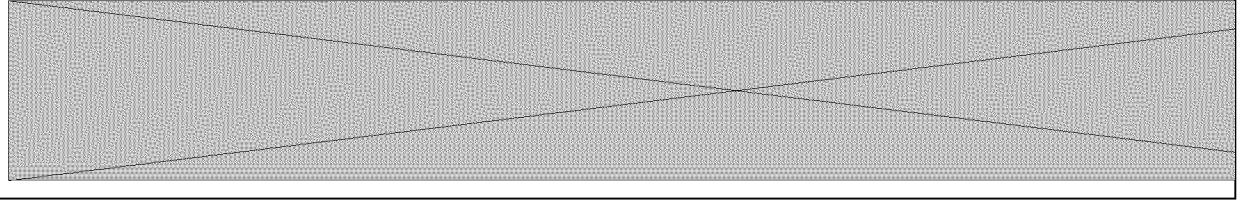

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From: Wehrly, Linc
Importance: Normal
Subject: Meeting Forward Notification: EPA – ARB In-Use VW Diesel Passenger Vehicles
Start Date/Time: Mon 7/20/2015 12:30:00 PM
End Date/Time: Mon 7/20/2015 1:00:00 PM

Your meeting was forwarded

Wehrly, Linc has forwarded your meeting request to additional people.

Meeting
EPA – ARB In-Use VW Diesel Passenger Vehicles

Meeting Time
Thursday, July 23, 2015 2:00 PM - Thursday, July 23, 2015 3:00 PM

Recipients
Snyder, Jim

All times listed are in the following time zone: (UTC-05:00) Eastern Time (US & Canada)

From: Ex. 7
Location: ARB Conference Room EXC (AN1)
Importance: Normal
Subject: EPA – ARB In-Use VW Diesel Passenger Vehicles
Start Date/Time: Thur 7/23/2015 6:00:00 PM
End Date/Time: Thur 7/23/2015 7:00:00 PM
1Q1502 In-Use Emission Testing of LD-Diesel Vehicles Preliminary Data for EPA 20150723.pdf
ARB EPA meeting OBD presentation 23 July 15.pdf

;

EPA – ARB Meeting on the In-Use Compliance Program Evaluation of Strategies On Certified On-road VW Diesel Vehicles
ORGANIZER: Ex. 7
ECARSD INVITEES: Ex. 7

Ex. 7

Non-ARB INVITEES: Joel Ball, David Good, and Linc Wehrly from EPA
VISITOR'S CENTER ESCORT/ARB CONTACT: Ex. 7
Ex. 7
MEETING PURPOSE: To present EPA some data on the current program that ARB is conducting (on-road and lab emissions) on Gen 2 VW diesel passenger vehicles, and discus concerns regarding Gen 1 and 3 vehicles.
CONFERENCE ROOM: El Monte – Annex 1 Executive Conference Room
Toll Free number: 888-566-6184
Participant passcode: Non-Responsive

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 7/20/2015 12:57:52 PM
Subject: Research the latest from Volkswagen on MSN Autos
MAIL_CONVERSATION_TOPIC: Research the latest from Volkswagen on MSN Autos
Created: Fri 6/17/2016 4:29:42 PM

View article...

To: Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Mon 7/20/2015 1:42:41 PM
Subject: RE: VW370 40145/16

Ex. 7 I see it in Verify scheduled for retest on the 21st.

Jim

From: Ex. 7 @vw.com]
Sent: Friday, July 17, 2015 9:30 AM
To: Snyder, Jim
Cc: Ex. 7
Subject: RE: VW370 40145/16

Hello Jim,

We are requesting a retest for the Highway cycle for Vehicle ID: VW370 40145/16, a 2016 Golf TDI configured as a Jetta Sedan. This decision is based on the official EPA rounded adjusted fuel economy of 64.4 MPG Highway found in Verify which is 3.2% below the Volkswagen test result of 66.5 MPG.

We are asking that this test be reschedule as soon as possible because of a short lead time to product launch. Please let us know the test date as soon as possible.

Regards,

Ex. 7

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

Ex. 7

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Thursday, July 16, 2015 11:56 AM
To: Ex. 7
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW370 40145/16

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 7/20/2015 2:53:35 PM
Subject: Research the latest from Volkswagen on MSN Autos
MAIL_CONVERSATION_TOPIC: Research the latest from Volkswagen on MSN Autos
Created: Fri 3/18/2016 6:18:32 PM

View article...

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 7/20/2015 3:23:07 PM
Subject: Audi's mid-engine 2017 R8 teaches Porsche a lesson
MAIL_CONVERSATION_TOPIC: Audi's mid-engine 2017 R8 teaches Porsche a lesson
Created: Fri 3/18/2016 6:18:32 PM

View article...

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ross Gatzke
Sent: Mon 7/20/2015 5:16:41 PM
Subject: RE: 2016 Cayman GT4 status
EO_GPRXV04.0C91.pdf

Hi, Jim
That's a strange one. We have a CARB Executive Order for the 4.0C91 test group and it identifies the Cayman GT4. I wonder if maybe it's a VECI issue? Do you want to give me the customer's contact information so I can handle it myself?

Ross Gatzke
Senior Engineer, Regulatory Affairs
Porsche Cars North America
Ross.Gatzke@porsche.us
Tel: 770-290-3516
Fax: 678-225-6580

From:	"Snyder, Jim" <Snyder.Jim@epa.gov>
To:	Ross Gatzke <Ross.Gatzke@porsche.us>
Date:	07/20/2015 12:33 PM
Subject:	RE: 2016 Cayman GT4 status

I just noticed the guy lives in **Ex. 6** Is it possible the Calif. /177 state is held up?

From: Snyder, Jim
Sent: Monday, July 20, 2015 12:26 PM
To: 'Ross Gatzke'
Subject: 2016 Cayman GT4 status

Hi Ross, I have a public inquiry about the status of 2016 Cayman GT4. From what I see, we issued a certificate for GPRXV04.0C91 in april with a commerce data same time. Is this the only test group for Cayman GT4? Are these being sold ? His car is held up in port and he's hearing rumors its our fault.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 7/20/2015 5:20:17 PM
Subject: Release Date Change question

Hi Dave;

I was just informed by our marketing department that our face lifted Passat for 2016 will not be offered until later this year. I had already labeled the 2016 Passat equipped with the 3.6L VR6 gasoline engine. Which at that time had a release date of July 13th. So the model now appears on the guide website. Is it possible to change the release date now to September 23rd and not send the label VGA index #067 to the contractor on the next update? The marketing types would rather not have the Passat listed on the fuel economy guide website until it's market introduction. Let me know your thoughts. Perhaps you can give me a call on Tuesday.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Ex. 7
From: Good, David
Sent: Mon 7/20/2015 5:47:25 PM
Subject: RE: Release Date Change question

Ex. 7

Yes, go ahead and revise the release date.

Dave

From: Ex. 7
Sent: Monday, July 20, 2015 1:20 PM
To: Good, David
Cc: Ex. 7
Subject: Release Date Change question

Hi Dave;

I was just informed by our marketing department that our face lifted Passat for 2016 will not be offered until later this year. I had already labeled the 2016 Passat equipped with the 3.6L VR6 gasoline engine. Which at that time had a release date of July 13th. So the model now appears on the guide website. Is it possible to change the release date now to September 23rd and not send the label VGA index #067 to the contractor on the next update? The marketing types would rather not have the Passat listed on the fuel economy guide website until it's market introduction. Let me know your thoughts. Perhaps you can give me a call on Tuesday.

Thanks,

Ex. 7

Ex. 7

Volkswagen Group of America, Inc.

Ex. 7

To: Sohacki, Lynn[sohacki.lynn@epa.gov]; Liebner, Bernd[liebner.bernd@epa.gov]
From: Glas, Tobias
Sent: Mon 7/20/2015 7:30:36 PM
Subject: ESP
ESP Deactivation.pdf

Hi Lynn, hi Bernd,

Today's car was V148RXX-0232, so Bruce had the right paper work with the right vehicle # on it.

Here is the instruction to turn off the ESP.

Best regards

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

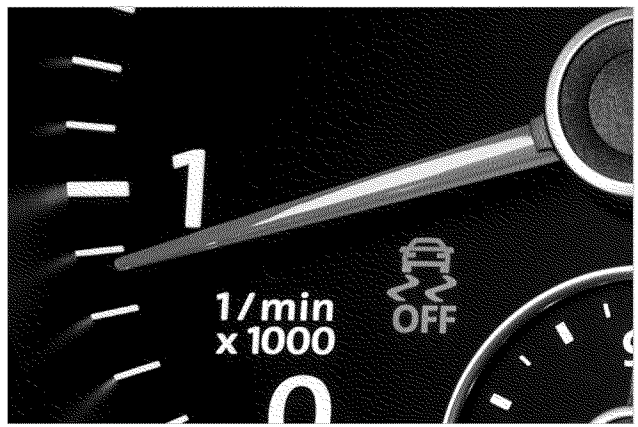
Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

ESP Deactivation

IMPORTANT: This procedure must be repeated with every key cycle (engine off).

1. Remove foot from brake. Make sure all doors are closed during the procedure.
2. Key on with transmission in "P" (park) for at least 5 seconds. **Do not start engine!!!!**
   a) In case of manual transmission remove from gear.
3. Turn on hazard lights. Immediately after 5 flashes proceed to next step.
4. Depress and release accelerator pedal 5 times all the way to the floor (past 1st stop).
5. Look for solid ESP symbol:



6. If ESP symbol is solid, depress brake (and clutch) and start the engine within 5 seconds.
7. Proceed with testing.
8. Hazards must remain on until engine is turned off.
9. **Procedure must be repeated before next start.**

Ex. 7

From: Ex. 7
Sent: Mon 7/20/2015 10:28:06 PM
Subject: EPA – ARB In-Use VW Diesel Passenger Vehicles

EPA – ARB In-Use VW Diesel Passenger Vehicles
Scheduled: Thursday, Jul 23, 2015 from 11:00 AM to 12:00 PM
Location: ARB Conference Room EXC (AN1)

Ex. 7

Sharon C. Lemieux, P.E.
Branch Chief
In-Use Vehicle Programs
Emissions Compliance, Automotive Regulations and Science Division
Air Resources Board

To: jack.moore@aramcoservices.com[jack.moore@aramcoservices.com]; Julius.Basler-Meier@bmw.de[Julius.Basler-Meier@bmw.de]; uwe.higgen@bmw.de[uwe.higgen@bmw.de]; Claudia.Kolbinger@bmw.de[Claudia.Kolbinger@bmw.de]; janea.scott@energy.ca.gov[janea.scott@energy.ca.gov]; steven.cliff@dot.ca.gov[steven.cliff@dot.ca.gov]; Ex. 7 bdghosh@cht.in[bdghosh@cht.in]; jeffrey.jacobs@chevron.com[jeffrey.jacobs@chevron.com]; michael.hartrick@fcagroup.com[michael.hartrick@fcagroup.com]; reginald.modlin@fcagroup.com[reginald.modlin@fcagroup.com]; jennifer.rumsey@cummins.com[jennifer.rumsey@cummins.com]; john.c.wall@cummins.com[john.c.wall@cummins.com]; sean.waters@daimler.com[sean.waters@daimler.com]; s.watson@fiafoundation.org[s.watson@fiafoundation.org]; jviera@ford.com[jviera@ford.com]; britta.gross@gm.com[britta.gross@gm.com]; robert_bienenfeld@ahm.honda.com[robert_bienenfeld@ahm.honda.com]; serge.passolunghi@renault.com[serge.passolunghi@renault.com]; jerome.perrin@renault.com[jerome.perrin@renault.com]; philippe.schulz@renault.com[philippe.schulz@renault.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; LBrowy@SempraUtilities.com[LBrowy@semprautilities.com]; jgreed@semprautilities.com[jgreed@semprautilities.com]; Angus.Gillespie@shell.com[Angus.Gillespie@shell.com]; Niel.golightly@shell.com[Niel.golightly@shell.com]; chencm@sinopec.com[chencm@sinopec.com]; rwimmer@tma.toyota.com[rwimmer@tma.toyota.com]; fred.joseck@ee.doe.gov[fred.joseck@ee.doe.gov]; kevin.womack@dot.gov[kevin.womack@dot.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; frank.seyfried@volkswagen.de[frank.seyfried@volkswagen.de]; khamberg@westport.com[khamberg@westport.com]; amy.jordan@aramcoservices.com[amy.jordan@aramcoservices.com]; simon.ellgas@bmw.de[simon.ellgas@bmw.de]; julia.sohnen@bmw.de[julia.sohnen@bmw.de]; Jim.McKinney@energy.ca.gov[Jim.McKinney@energy.ca.gov]; tolson@energy.ca.gov[tolson@energy.ca.gov]; garth.hopkins@dot.ca.gov[garth.hopkins@dot.ca.gov]; nicole_longoria@dot.ca.gov[nicole_longoria@dot.ca.gov]; patrick_tyner@dot.ca.gov[patrick_tyner@dot.ca.gov]; Ex. 7 Ex. 7 ; aspathak@cht.in[aspathak@cht.in]; jjgl@chevron.com[jjgl@chevron.com]; vaughn.burns@fcagroup.com[vaughn.burns@fcagroup.com]; r.cuypers@fiafoundation.org[r.cuypers@fiafoundation.org]; twalling@ford.com[twalling@ford.com]; cwilli96@ford.com[cwilli96@ford.com]; michael.o.harpster@gm.com[michael.o.harpster@gm.com]; ian.sutherland@gm.com[ian.sutherland@gm.com]; ryan_harty@ahm.honda.com[ryan_harty@ahm.honda.com]; Jjetter@hra.com[Jjetter@hra.com]; frederic.canal@renault.com[frederic.canal@renault.com]; serge.matynia@renault.com[serge.matynia@renault.com]; lmirisola@aqmd.gov[lmirisola@aqmd.gov]; xavier.riera-palou@shell.com[xavier.riera-palou@shell.com]; ted.rolfvondenbaumen@shell.com[ted.rolfvondenbaumen@shell.com]; Nibei.ripp@sinopec.com[Nibei.ripp@sinopec.com]; wangj.ripp@sinopec.com[wangj.ripp@sinopec.com]; zhangjr.ripp@sinopec.com[zhangjr.ripp@sinopec.com]; ken.laberteaux@tema.toyota.com[ken.laberteaux@tema.toyota.com]; michael.lord@tema.toyota.com[michael.lord@tema.toyota.com]; benjamin@anl.gov[benjamin@anl.gov]; shawn.johnson@dot.gov[shawn.johnson@dot.gov]; Snapp, Lisa[snapp.lisa@epa.gov]; stefan.schmerbeck@volkswagen.de[stefan.schmerbeck@volkswagen.de]; pouellette@westport.com[pouellette@westport.com]; graypwilliams@mac.com[graypwilliams@mac.com]; william.craven@mbusa.com[william.craven@mbusa.com]; benjamin@anl.gov[benjamin@anl.gov]; wangj.ripp@sinopec.com[wangj.ripp@sinopec.com]

Cc: Joan Ogden[jmogden@ucdavis.edu]; Lewis M Fulton[lmfulton@ucdavis.edu]; Amy Jaffe[abmjaffe@ucdavis.edu]; Sonia Yeh[slyeh@ucdavis.edu]; Elisabeth Y Bourne[bybourne@ucdavis.edu]; Thomas Mackey[tcmackey@ucdavis.edu]; Joe Krovoza[jfkrovoza@ucdavis.edu]; Daniel Sperling[dsperling@ucdavis.edu]

From: Paul W Gruber
Sent: Tue 7/21/2015 6:06:41 PM
Subject: Reminder to register: STEPS Board Meeting on Aug. 18, precedes Asilomar Conference Aug. 18-21, 2015
draft Agenda - NextSTEPS Advisory Board Meeting, Aug. 18, 2015.docx

Dear STEPS board members,

We are less than a month away from the **STEPS Advisory Board Meeting in Pacific Gove, CA on August 18, noon to 4:30pm,** and the Asilomar Conference, "Transportation and Energy Policy in a Volatile World," on Aug. 18-21. Please **click here to register for the STEPS board meeting on Aug. 18**, if you have not done so. See registrant lists below. The preliminary agenda is attached. STEPS 2015 project results are coming in now, and we will add several presentations of interesting research results to this agenda.

YES: Board Meeting registrants so far

ARB

BMW

Chevron

Cummins

Daimler

EPA

FIA Fdn.

Honda

Toyota

***Not yet* registered for Board Meeting**

Aramco

Caltrans

CEC

Chrysler

CHT

Ford

GM

Renault

South Coast AQMD

SDG&E/SoCalGas

Shell

Sinopec (cannot attend – will try to attend in Dec.)

VW

Westport

US DOE

US DOT

See many of you soon.

Best regards,

Paul

Paul W. Gruber

Executive Director

NextSTEPS (Sustainable Transportation Energy Pathways)

Institute of Transportation Studies

University of California, Davis

www.steps.ucdavis.edu

office: (530) 752-1934

mobile: (703) 772-4053

From: Paul W Gruber
Sent: Tuesday, June 23, 2015 5:10 PM
To: 'jack.moore@aramcoservices.com'; 'uwe.higgen@bmw.de'; 'Claudia.Kolbinger@bmw.de'; 'janea.scott@energy.ca.gov'; 'garth.hopkins@dot.ca.gov'; Ex. 7 'bdghosh@cht.in'; 'jeffrey.jacobs@chevron.com'; 'michael.hartrick@fcagroup.com'; 'reginald.modlin@fcagroup.com'; 'jennifer.rumsey@cummins.com'; 'john.c.wall@cummins.com'; 'sean.waters@daimler.com'; 's.watson@fiafoundation.org'; 'jviera@ford.com'; 'britta.gross@gm.com'; 'robert_bienenfeld@ahm.honda.com'; 'serge.passolunghi@renault.com'; 'jerome.perrin@renault.com'; 'philippe.schulz@renault.com'; 'mmiyasato@aqmd.gov'; 'LBrowy@SempraUtilities.com'; 'jgreed@semprautilities.com'; 'Angus.Gillespie@shell.com'; 'Niel.golightly@shell.com'; 'chencm@sinopec.com'; 'rwimmer@tma.toyota.com'; 'fred.joseck@ee.doe.gov'; 'kevin.womack@dot.gov'; 'grundler.christopher@epa.gov'; 'Simon.karl@epa.gov'; 'Joerg.Launer@vw.com'; 'frank.seyfried@volkswagen.de'; 'khamberg@westport.com'
Cc: Joan Ogden (jmogden@ucdavis.edu); Lewis M Fulton (lmfulton@ucdavis.edu); Amy Jaffe; Sonia Yeh; Beth Y Bourne (bybourne@ucdavis.edu); Thomas Mackey; Joe Krovoza (jfkrovoza@ucdavis.edu)
Subject: Registration: STEPS Board Meeting Aug. 18, precedes Asilomar Conference Aug. 18-21, 2015

Dear STEPS board members:

We will host our STEPS annual board meeting on Aug. 18, from 12:00pm to 4:00pm, preceding the Asilomar 2015 conference in Pacific Grove, California.

Many of you have already registered for the Conference. Please now **register for the STEPS board meeting on Aug. 18** (if the Google form does not open, email your RSVP to Beth Bourne, bybourne@ucdavis.edu). We plan to present research insights and discuss key research topics regarding alternative fuel and vehicle transitions. As usual, I hope we can have 1-2 energetic representatives from each sponsoring organization. An agenda is forthcoming.

If you haven't yet registered for the Asilomar Conference, details and registration is here: Asilomar Conference website.

Feel free to reach out to us if you have any questions. We're looking forward to seeing you soon.

Best regards,

Paul

Paul W. Gruber

Executive Director

NextSTEPS (Sustainable Transportation Energy Pathways)

Institute of Transportation Studies

University of California, Davis

www.steps.ucdavis.edu

office: (530) 752-1934

mobile: (703) 772-4053

From: Dan Sperling [mailto:its@bmail50.shgpbms1.bmsend.com] **On Behalf Of** Dan Sperling
Sent: Wednesday, April 15, 2015 5:07 PM
To: Paul W Gruber
Subject: Personal Invitation: Asilomar Conference Aug. 18-21, 2015

View this email in your browser

Dear Asilomar Invitee:

I am writing to invite you to attend the 15th Biennial Asilomar Conference on Transportation and Energy. Attendance at this conference is limited to 200 and is by invitation only. This invitation is non-transferable; we are extending it to you personally because of your leadership and expertise in transportation energy issues.

This year's theme is "**Transportation and Energy Policy in a Volatile World**." Major shifts in energy supply and price are testing business strategies and government approaches to address energy and environmental challenges. This year's conference will focus on near- and medium-term policy and market strategies, and supporting innovation to reach climate, economic and mobility goals for transportation.

These issues will be addressed by participants from government, industry, non-governmental organizations (NGOs) and academia. A preliminary agenda can be found here. We will send an updated agenda with additional speakers in about a month.

The conference will be held at the Asilomar Conference Center in Pacific Grove, California (near

Monterey) from the evening of Tuesday, August 18 until noon on Friday, August 21, 2015. This unique gathering is hosted by the UC Davis Institute of Transportation Studies (ITS-Davis) under the auspices of the Energy and Alternative Fuels Committees and the Climate Change Task Force of the U.S. Transportation Research Board.

Early registration is $375 for participants from government, academia or NGOs, and $525 for participants from industry. Registration fees will increase by $100 on July 11. The registration fee includes the seminars and copies of presentations.

Registration scholarships are available for participants from non-governmental organizations. Please contact me if interested.

Registration is now available through our Asilomar Conference website. Information about accommodations, off-site lodging and area attractions may be found there, as well as a list of steering committee members.

Please contact Asilomar Conference Coordinator Bill Kuhlman (wbkuhlman@ucdavis.edu) or me (dsperling@ucdavis.edu) if you have questions. We hope to see you at Asilomar 2015.

Sincerely,

Dan Sperling
Conference Host
Distinguished Professor and Founding Director, ITS-Davis

P.S. If you believe there are others who can substantively benefit the conference, please suggest their names for formal invitation.

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You are receiving this email because of your relationship with ITS-Davis. Please reconfirm your interest in receiving emails from us. If you do not wish to receive any more emails, you can unsubscribe here.
This message was sent to pwgruber@ucdavis.edu by its@ucdavis.edu
UC Davis Institute of Transportation Studies, 1605 Tilia Street, Suite 100, Davis, California 95616

Unsubscribe | Manage Subscription | Forward Email | Report Abuse

.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 7/21/2015 7:25:00 PM
Subject: P.M. NEWSCAST: Where self-drivers rule the road | NHTSA chief on car tech | New Kia Sportage spied | Infiniti Q30 | Report: BMW, Audi, Benz near map deal | FCA China venture

July 21, 2015

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TOP STORY: A self-driving haven?

New Kia Sportage spied »

Infiniti unwraps Q30 »

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1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Tue 7/21/2015 7:25:20 PM
Subject: P.M. NEWSCAST: Where self-drivers rule the road | NHTSA chief on car tech | New Kia Sportage spied | Infiniti Q30 | Report: BMW, Audi, Benz near map deal | FCA China venture

July 21, 2015

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New Kia Sportage spied »

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1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Gonzalez, Gail[Gonzalez.Gail@epa.gov]; Caldwell, Amy[caldwell.amy@epa.gov]; Wasenko, Barbara[Wasenko.Barbara@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Betty Stendel[stendel.betty@epa.gov]; Kolowich, Bruce[kolowich.bruce@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Mylan, Christopher[Mylan.Christopher@epa.gov]; Haugen, David[haugen.david@epa.gov]; Miller, Debra L.[Miller.DebraL@epa.gov]; Watkins, Erica[Watkins.Erica@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Galano, Fidel[Galano.Fidel@epa.gov]; Johnson, Francene[Johnson.Francene@epa.gov]; Stewart, Gwen[Stewart.Gwen@epa.gov]; Jones, Jacqueline[Jones.Jacqueline@epa.gov]; Blubaugh, Jim[Blubaugh.Jim@epa.gov]; Weihrauch, John[Weihrauch.John@epa.gov]; Iffland, JoNell[Iffland.JoNell@epa.gov]; Berrier, Judi[Berrier.Judi@epa.gov]; Greuel, Justin[Greuel.Justin@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Sargeant, Kathryn[sargeant.kathryn@epa.gov]; Vawters, Katie[Vawters.Katie@epa.gov]; Derksen, Kimberly[derksen.kimberly@epa.gov]; Cook, Leila[cook.leila@epa.gov]; McQueen, Lyndia[mcqueen.lyndia@epa.gov]; Le, Madison[Le.Madison@epa.gov]; Peralta, Maria[Peralta.Maria@epa.gov]; Brusstar, Matt[brusstar.matt@epa.gov]; Horowitz, Michael[horowitz.michael@epa.gov]; Sabourin, Michael[sabourin.michael@epa.gov]; Haley, Mike[Haley.Mike@epa.gov]; Cooper, Nanette[cooper.nanette@epa.gov]; Paff, Patricia[paff.patricia@epa.gov]; Shaffer, Patricia[Shaffer.Patricia@epa.gov]; Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]; Curtis, Rhonda[Curtis.Rhonda@epa.gov]; Larson, Robert[larson.robert@epa.gov]; Waite, Sherry[waite.sherry@epa.gov]; Patterson, Susan[Patterson.Susan@epa.gov]; Nelson, Suzanne[nelson.suzanne@epa.gov]; Meekins, Tanya[Meekins.Tanya@epa.gov]; Moore, Theresa[Moore.Theresa@epa.gov]; Bradish, Tracey[bradish.tracey@epa.gov]
From: Stewart, Gwen
Sent: Wed 7/22/2015 11:35:41 AM
Subject: Grundler, Christopher Calendar
Grundler Christopher Calendar.ics

CHRISTOPHER GRUNDLER

CALENDAR

WEDNESDAY, JULY 22, 2015

AA OFFICE

10:00 AM – 11:00 AMPre-Brief: 3 Agency Meeting with Volkswagen

Location: RM. 6520 DC/RM. C-174 DOD AA

By Telephone: 866 299-3188

Ex. 6

11:00 PM – 1:00 PMMANAGEMENT TIME
1:00 PM – 1:45 PMGeneral with Ben and Lee

Location: Chris Office AA

2:00 PM – 3:00 PMWeekly SLT Meeting

Location: RM. 6520 DC/RM. C-174 DOD AA

By Telephone: 866 299-3188

Ex. 6

4:00 PM – 4:45 PMR
A

Ex. 5

Location: RM. 6520 DC/RM. C-174 DOD AA

By Telephone: 866 299-3188

Ex. 6

Gwen Stewart

Office of Transportation and Air Quality

202 564-1682 – Telephone

202 564-1686 – Fax Number

Stewart.gwen@epa.gov

To: Gregory Allen (EEO) (Gregory.Allen@vw.com)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
Cc: Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]; Gordinier, Terry[Gordinier.Terry@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Wed 7/22/2015 12:39:32 PM
Subject: VW370 40145/16_7-211-15
VW370 40145-16_7-12-15.pdf

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Belser, Evan[Belser.Evan@epa.gov]
Cc: Michael J. Myers[Michael.Myers@ag.ny.gov]
From: Brian Lusignan
Sent: Wed 7/22/2015 12:46:44 PM
Subject: RE: Defeat Devices Initiative

Hi Evan,

Looking at our schedules, I think tomorrow (Thursday) at 4 is the only time that works for both of us. I don't think this will be a long or particularly intensive conversation, we just want to touch base.

If you think it would be useful, I would also be happy to meet with you and Phil in person sometime next Wednesday (July 29) in DC.

Thanks,

-Brian

From: Belser, Evan [mailto:Belser.Evan@epa.gov]
Sent: Tuesday, July 21, 2015 5:30 PM
To: Brian Lusignan
Cc: Michael J. Myers
Subject: RE: Defeat Devices Initiative

I'd like to have this call when Phill Brooks can join us. Schedules this week are bad, and our best chance is to sneak in something during a regularly scheduled meeting I already have with Phill. Could we talk for about 15 minutes tomorrow at 10:45 or 11am Thursday? Of course, we have more than 15 minutes to talk about this work with you; this is just what we can do with Phill in the immediate near term.

If not those times, I could make Thursday at 4pm – 5pm.

Thanks, and looking forward to talking.
Evan

Evan Belser

Acting Chief, Mobile Source Enforcement Branch, Air Enforcement Division

National Coordinator for Administrative Litigation, Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

202-564-6850

From: Brian Lusignan [mailto:Brian.Lusignan@ag.ny.gov]
Sent: Monday, July 20, 2015 8:49 AM
To: Belser, Evan
Cc: Michael J. Myers
Subject: RE: Defeat Devices Initiative

Hi Evan,

Mike and I spoke to our bureau chief about this initiative on Friday. Are you available for a short conference call with Mike and I sometime this week? We are generally available today anytime except 2-3, tomorrow between 12 and 3, Wednesday anytime, and anytime Thursday after 11am. Just let us know if you have a half hour or so to talk.

Thanks,

-Brian

From: Belser, Evan [mailto:Belser.Evan@epa.gov]
Sent: Wednesday, July 15, 2015 10:42 AM
To: Brian Lusignan
Subject: RE: Defeat Devices Initiative

Brian,

I will look into sharing the training materials; we've only every shared within EPA.

I am around July 28 -29 and would love to host you. We could talk about this initiative, and otherwise get some lunch and catch up. Te afternoon of the 29th is wide open for me.

Evan

From: Brian Lusignan [mailto:Brian.Lusignan@ag.ny.gov]
Sent: Wednesday, July 15, 2015 9:29 AM
To: Belser, Evan
Subject: RE: Defeat Devices Initiative

Hi Evan,

Thanks for your response. I know Mike and I are interested in this initiative, and we're working on getting buy-in from our executive officials. We would be interested in reviewing any training materials that you have, with the caveat that anything you send us could be subject to public disclosure in a FOIL request.

I am actually going to be in Washington, DC for unrelated reasons the week of July 27. Would it be possible/beneficial for me to stop by your offices to discuss possible specific leads? Anytime on July 29 would work for me, and the afternoon of July 28 is also a

possibility. If there's another time on July 28 or July 27 that works better for you, let me know and I may be able to adjust my schedule. Let me know what you think!

Thanks,

-Brian

From: Belser, Evan [mailto:Belser.Evan@epa.gov]
Sent: Tuesday, July 14, 2015 4:20 PM
To: Brian Lusignan; Michael J. Myers
Cc: Brooks, Phillip
Subject: RE: Defeat Devices Initiative

Hello Brian and Mike, and thank you for following up. Please excuse the delay of my response. I had a wonderful vacation recently, and am still digging out of the emails that were waiting for me upon my return.

I can confirm that things remain as I described: we're developing cases primarily against companies that manufacture defeat devices, and to a lesser extent against those companies and individuals that install them. We have some specific leads in NY, and we're available to discuss those if you'd like. One update is that we are nearly finished producing a diesel tampering inspection training video, and just today recorded a comprehensive webinar about vehicle and engine enforcement generally. Within any applicable limitations, we would be happy to share these materials if you are interested.

Are there updates on your end? I recall hearing that you thought this sounded like work worth doing, but need to scope just whether and how you would be able to participate.

This may be easier by phone; please let me know if you'd like to talk.

Thanks,

Evan

Evan Belser

Acting Chief, Mobile Source Enforcement Branch, Air Enforcement Division

National Coordinator for Administrative Litigation, Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

202-564-6850

Do not release this email. This is confidential attorney-client communication and privileged attorney work product created for law enforcement purposes.

From: Brian Lusignan [mailto:Brian.Lusignan@ag.ny.gov]
Sent: Friday, July 10, 2015 8:56 AM
To: Belser, Evan
Cc: Michael J. Myers
Subject: Defeat Devices Initiative

Hi Evan,

Hope you had a nice vacation! We were just wondering whether there were any recent updates regarding defeat device enforcement matters, especially with respect to the potential role of the State of New York.

If you'd like to chat, I'm available anytime today except for 1PM to 2PM, and generally available next week except for Thursday.

Thanks,

-Brian

Brian Lusignan

Assistant Attorney General

NYS Office of the Attorney General

Environmental Protection Bureau

The Capitol

Albany NY 12224-0341

(518) 776-2399

Please note the new phone number.

From: Belser, Evan
Required Attendees: Brian Lusignan; Michael J. Myers
Optional Attendees: Werner, Jacqueline; Brooks, Phillip
Location: Non-Responsive
Importance: Normal
Subject: Defeat Device Enforcement Collaboration
Start Date/Time: Thur 7/23/2015 8:00:00 PM
End Date/Time: Thur 7/23/2015 8:30:00 PM

From: Belser, Evan
Required Attendees: Brian Lusignan; Michael J. Myers
Optional Attendees: Werner, Jacqueline; Brooks, Phillip
Location: Non-Responsive
Importance: Normal
Subject: Defeat Device Enforcement Collaboration
Start Date/Time: Thur 7/23/2015 8:00:00 PM
End Date/Time: Thur 7/23/2015 8:30:00 PM

From: Belser, Evan
Required Attendees: Brian Lusignan; Michael J. Myers
Optional Attendees: Werner, Jacqueline; Brooks, Phillip
Location: **Non-Responsive**
Importance: Normal
Subject: Defeat Device Enforcement Collaboration
Start Date/Time: Thur 7/23/2015 8:00:00 PM
End Date/Time: Thur 7/23/2015 8:30:00 PM

From: Belser, Evan
Required Attendees: Brian Lusignan; Michael J. Myers
Optional Attendees: Werner, Jacqueline; Brooks, Phillip
Location: Non-Responsive
Importance: Normal
Subject: Defeat Device Enforcement Collaboration
Start Date/Time: Thur 7/23/2015 8:00:00 PM
End Date/Time: Thur 7/23/2015 8:30:00 PM

From: Brooks, Phillip
Location: 866-299-3188, Non-Responsive
Importance: Normal
Subject: Accepted: Defeat Device Enforcement Collaboration
Start Date/Time: Thur 7/23/2015 8:00:00 PM
End Date/Time: Thur 7/23/2015 8:30:00 PM

To: Charmley, William[charmley.william@epa.gov]
From: Grundler, Christopher
Sent: Wed 7/22/2015 3:38:36 PM
Subject: Porsche

I think it is entirely possible that the VW folks know nothing of next weeks meeting---Porsche went through some DC Lobbying firm to arrange (with an ex-NHTSA enforcement official!!)

To: Charmley, William[charmley.william@epa.gov]
From: Grundler, Christopher
Sent: Wed 7/22/2015 3:39:58 PM
Subject: FW: Good Bye

Fyi—this was back in april. Perhaps things have improved

Ex. 7

Sent: Tuesday, April 07, 2015 3:33 PM
To: Grundler, Christopher
Subject: RE: Good Bye

Hello Chris,

Oliver is Dr. Neusser's deputy and is supposed to oversee the Group Powertrain strategy. Right about when you met Neusser two years ago he was promoted from VW brand powertrain boss/Group powertrain boss to VW overall development boss with a board member seat. He shed the brand powertrain position but retained the Group powertrain job in addition to his new vehicle development job.

Non-Responsive

Non-Responsive

Non-Responsive

Non-Responsive

Thanks again and talk to you soon,

Ex. 7

PS: Ex. 7 already responded with a think you for your note.

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Tuesday, April 07, 2015 12:56 PM
To: Ex. 7
Subject: RE: Good Bye

Thanks. What's his new job, and do you have his old one?

From: Ex. 7
Sent: Tuesday, April 07, 2015 7:36 AM
To: Grundler, Christopher
Subject: RE: Good Bye

Hello Chris,

Non-Responsive

Things are well and I hope all is well with you too. Looking forward to additional discussions with you later in the year.

Best,

Ex. 7

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Monday, April 06, 2015 5:24 PM
To: Ex. 7
Subject: FW: Good Bye

Ex. 7 would you mind forwarding this to Oliver's new address. I did not know he was leaving so soon. This got bounced back to me

Hope all is well

C

From: Grundler, Christopher
Sent: Monday, April 06, 2015 5:16 PM
To: Ex. 7
Subject: RE: Good Bye

Dear Oliver:

Non-Responsive

It sounds like congratulations are in order! I will be eager to learn about what this new offered job is all about, and am happy to know that our paths will cross again. Best wishes to you Oliver, and I hope your repatriation into German culture---after your years in America—goes

smoothly.

Machts gut,

Chris

From: Ex. 7
Sent: Friday, February 27, 2015 3:56 PM
To: Grundler, Christopher
Subject: Good Bye

Hello Chris,

I just wanted to send you a personal note to say Good Bye.

Non-Responsive

Ex. 7

Ex. 7

To: Ex. 7 @vw.com]
From: Grundler, Christopher
Sent: Wed 7/22/2015 3:41:55 PM
Subject: RE: Good Bye

Ex. 7

Bill just told me of your historic promotion. Congratulations! Im looking forward to seeing you tomorrow, and our discussion. Hope all else in your life is grand.

Chris

From: Ex. 7 @vw.com]
Sent: Tuesday, April 07, 2015 3:33 PM
To: Grundler, Christopher
Subject: RE: Good Bye

Hello Chris,

Ex. 7 is Dr. Neusser's deputy and is supposed to oversee the Group Powertrain strategy. Right about when you met Neusser two years ago he was promoted from VW brand powertrain boss/Group powertrain boss to VW overall development boss with a board member seat. He shed the brand powertrain position but retained the Group powertrain job in addition to his new vehicle development job. He can't run both on his own and has tapped Ex. 7 to help him administer his vision for Group powertrain strategy – he has been unhappy with previous people in that spot.

Ex. 7

Ex. 7

Ex. 7

Thanks again and talk to you soon,

Ex. 7

PS: Ex. 7 already responded with a think you for your note.

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Tuesday, April 07, 2015 12:56 PM
To: Ex. 7 (EEO)
Subject: RE: Good Bye

Thanks. What's his new job, and do you have his old one?

From: Ex. 7 @vw.com]
Sent: Tuesday, April 07, 2015 7:36 AM
To: Grundler, Christopher
Subject: RE: Good Bye

Hello Chris,

Yes, I sure will forward to Ex. 7 I talk to him regularly – I don't think the transition is going that smoothly. I think he may prefer to be here still, but I think things will work out for him in the longer term.

Things are well and I hope all is well with you too. Looking forward to additional discussions with you later in the year.

Best,

Ex. 7

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Monday, April 06, 2015 5:24 PM
To: Ex. 7 (EEO)
Subject: FW: Good Bye

Ex. 7 —would you mind forwarding this to Ex. 7 new address. I did not know he was leaving so soon. This got bounced back to me

Hope all is well

C

From: Grundler, Christopher
Sent: Monday, April 06, 2015 5:16 PM
To: Ex. 7
Subject: RE: Good Bye

Dear Ex. 7

Please forgive this overdue reply. Your note arrived just before I left on holiday, and got lost in

the flood of email upon my return.

It sounds like congratulations are in order! I will be eager to learn about what this new offered job is all about, and am happy to know that our paths will cross again. Best wishes to you Ex. 7 and I hope your repatriation into German culture---after your years in America—goes smoothly.

Machts gut,

Chris

From: Ex. 7 @vw.com]
Sent: Friday, February 27, 2015 3:56 PM
To: Grundler, Christopher
Subject: Good Bye

Hello Chris,

I just wanted to send you a personal note to say Good Bye.

Unfortunately I have to return earlier to Wolfsburg than I wanted to, but when I got asked the question if I would take the offered job I could only answer "Yes" or Yes, please".

I wanted to thank your for your openness and approachability in all our conversions and with my new role I am 100% sure our path will cross again.

I really enjoyed working with you compared to your predecessor.

Ex. 7

Ex. 7

Engineering and Environmental Office

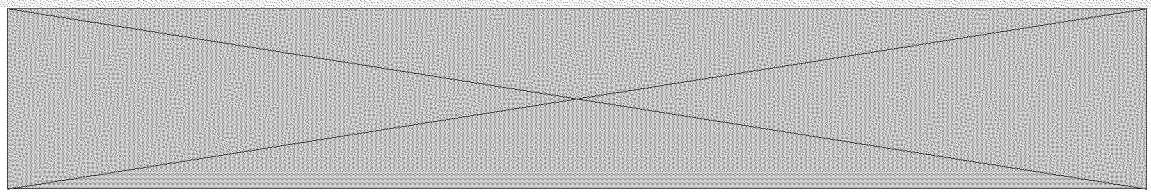
VOLKSWAGEN **Group of America, Inc.**

3800 Hamlin Road
Auburn Hills, MI 48326

Ex. 7

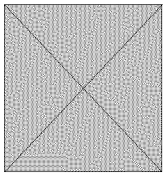
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Wed 7/22/2015 4:05:10 PM
Subject: Green Car Report Daily Headlines

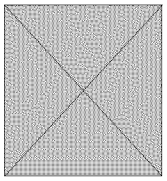
Email not displaying correctly? View it in your browser.



***Rate** your car and win an iPad.*

More ways to follow us:

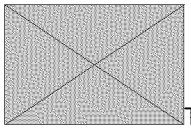




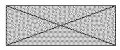
The latest from your friends at GCR:

Porsche Electric Car, Infiniti Q30, Electric Motorcycle Tour: Today's Car News

Jul 22, 2015 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

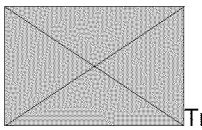
 Today, we have a report that Porsche will unveil an electric concept car at the 2015 Frankfurt Motor Show, the first official photo of the Infiniti Q30 compact, and details of a three-country electric-motorcycle tour. All this and more on Green Car Reports. We now have the first official photo of the production Infiniti Q30 compact hatchback...

comments | read more



Electric Motorcycle Tour: Three Countries, 6,800 Miles, 22 Days

Jul 22, 2015 03:00 pm | feedback@highgearmedia.com (Ben Rich)

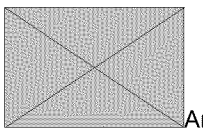
 Traveling by electric vehicles has come a long way in the past three years. Every summer since 2013, I have taken a long-distance road trip on an electric motorcycle, each time traveling a greater distance. This

summer I set my sights on riding a Zero SR from my home in New Jersey to Mexico and Canada. DON'T MISS: Electric Motorcycle Ride From...

comments | read more

Porsche's All-Electric Tesla Competitor Coming To Frankfurt As Concept: Report

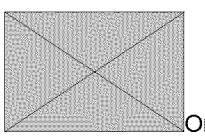
Jul 22, 2015 02:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Among established luxury brands, Porsche may be among the best equipped to challenge Tesla Motors. The German automaker known for its sports cars has already built three plug-in hybrids, beating Audi, BMW, and Mercedes-Benz to launch that powertrain in the large luxury sedan and mid-size crossover segments. And there have been persistent rumors...

comments | read more

Buick To Get Version Of Opel Adam Minicar As Range Is Renewed Over Next Few Years

Jul 22, 2015 01:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

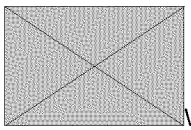
 Once upon a time, Buick and Opel models were sold alongside each other in U.S. dealerships. Now, it seems General Motors wants the two brands to actually share products, rather than showrooms. The current Buick Regal sedan is based on the Opel Insignia, and the upcoming Cascada convertible is a reworked Opel model as well. SEE ALSO: Could The Opel...

comments | read more

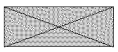
Toyota: Negative On Batteries Because It Has More Experience Than Any Other

Maker

Jul 22, 2015 11:00 am | feedback@highgearmedia.com (Stephen Edelstein)

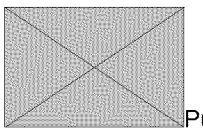
 When it comes to zero-emission vehicles, Toyota has placed its flag firmly on the side of hydrogen fuel cells. The company is now reviewing requests from potential buyers and lessees of its 2016 Mirai fuel cell car, which is expected to hit California roads before the end of the year. Meanwhile, in attack ads and multiple public comments by...

comments | read more

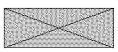


California Ends Electric-Car Rebates For Wealthy Buyers, Boosts Them For Poorest (UPDATED)

Jul 21, 2015 05:15 pm | feedback@highgearmedia.com (Stephen Edelstein)

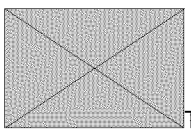
 Purchase rebates and tax credits have been a major factor in the growth of electric cars over the past few years. By easing the price gap between electric and internal-combustion models--and providing the allure of a cash handout--they've helped get more people into electric cars. But for some consumers, price is less of a concern than it is for...

comments | read more



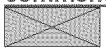
2017 Infiniti Q30 Video: 'Lust And Logic' In Compact Hatchback For Frankfurt Show (UPDATED)

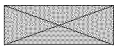
Jul 21, 2015 05:00 pm | feedback@highgearmedia.com (John Voelcker)

 Two years after the unveiling of a concept car that previewed it, the 2017 Infiniti Q30 compact luxury

hatchback will launch at the Frankfurt Auto Show in September. Nissan's luxury brand confirmed the launch yesterday, for the same show where that concept--in reality a thinly-disguised version of the production car--appeared in 2013. [UPDATE: On...

comments | read more





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Our mailing address is:
High Gear Media
830 Menlo Ave, Suite 201
Menlo Park, CA 94025

Add us to your address book

Copyright (C) 2015 High Gear Media All rights reserved.

Update your profile

.

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Wed 7/22/2015 6:33:37 PM
Subject: RE: 2016 Passat 3.6L still on website [It's been pulled.] NNTO

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Wednesday, July 22, 2015 11:12 AM
To: Good, David
Subject: 2016 Passat 3.6L still on website

Hi Dave;

I just wanted to let you know that I check the fuel economy guide website and that 2016 Passat 3.6L (label index VGA #067) is still up. If you have time today, could you please follow up with the contractor to take it down until September.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 7/22/2015 6:52:29 PM
Subject: RE: 2016 Passat 3.6L still on website [It's been pulled.] NNTO

Thank you very much Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, July 22, 2015 2:34 PM
To: Thomas, Richard (EEO)
Subject: RE: 2016 Passat 3.6L still on website [It's been pulled.] NNTO

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Wednesday, July 22, 2015 11:12 AM
To: Good, David
Subject: 2016 Passat 3.6L still on website

Hi Dave;

I just wanted to let you know that I check the fuel economy guide website and that 2016 Passat 3.6L (label index VGA #067) is still up. If you have time today, could you please follow up with the contractor to take it down until September.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Wed 7/22/2015 7:32:30 PM
Subject: Diesel nicknames

Hi Bill, can you clarify the 4 cylinder Diesel engine naming? I'm hearing new and next gen, and gen 3 kicked around, , it may be confusing

Prior to 2013 MY there was the TDi with NOX adsorber (Gen 1?)

For 2013 MY a new version with SCR was available in the Passat only. (Gen 2?, new Gen?)

For 2014MY the SCR version expanded to Golf, Jetta, and Beetle.

For 2015MY a newer, more compact TDI w/SCR offered on Passat, Golf, Jetta, and Beetle. (do you call this Gen 3? Handouts call it "next generation")

For 2016MY, I'm testing a carryover version in a Golf right now.

I know you call the latest gasoline TFSI engine the "Gen III" but Carb is calling the latest diesel that too.

And this doesn't cover the Audi V6s…

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Ex. 7 (EEO)
Sent: Wed 7/22/2015 7:44:01 PM
Subject: RE: Good Bye

Hello Chris,

Thank you very much and I am looking forward to the discussion.

See you soon,

Ex. 7

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Wednesday, July 22, 2015 11:42 AM
To: Ex. 7 (EEO)
Subject: RE: Good Bye

Ex. 7

Bill just told me of your historic promotion. Congratulations! Im looking forward to seeing you tomorrow, and our discussion. Hope all else in your life is grand.

Chris

From: Ex. 7 @vw.com]
Sent: Tuesday, April 07, 2015 3:33 PM
To: Grundler, Christopher
Subject: RE: Good Bye

Hello Chris,

Ex. 7 is Dr. Neusser's deputy and is supposed to oversee the Group Powertrain strategy. Right about when you met Neusser two years ago he was promoted from VW brand powertrain boss/Group powertrain boss to VW overall development boss with a board member seat. He shed the brand powertrain position but retained the Group powertrain job in addition to his new vehicle development job. He can't run both on his own and has tapped Ex. 7 to help him administer his vision for Group powertrain strategy – he has been unhappy with previous people in that spot.

Ex. 7

Ex. 7

Thanks again and talk to you soon,

Ex. 7

PS: Ex. 7 already responded with a think you for your note.

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Tuesday, April 07, 2015 12:56 PM
To: Ex. 7 (EEO)

Subject: RE: Good Bye

Thanks. What's his new job, and do you have his old one?

From: Ex. 7 @vw.com]
Sent: Tuesday, April 07, 2015 7:36 AM
To: Grundler, Christopher
Subject: RE: Good Bye

Hello Chris,

Yes, I sure will forward to Ex. 7 I talk to him regularly – I don't think the transition is going that smoothly. I think he may prefer to be here still, but I think things will work out for him in the longer term.

Things are well and I hope all is well with you too. Looking forward to additional discussions with you later in the year.

Best,

Ex. 7

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Monday, April 06, 2015 5:24 PM
To: Ex. 7 (EEO)
Subject: FW: Good Bye

Ex. 7 —would you mind forwarding this to Ex. 7 new address. I did not know he was leaving so soon. This got bounced back to me

Hope all is well

C

From: Grundler, Christopher
Sent: Monday, April 06, 2015 5:16 PM
To: Ex. 7 (EEO)'
Subject: RE: Good Bye

Dear Ex. 7

Please forgive this overdue reply. Your note arrived just before I left on holiday, and got lost in the flood of email upon my return.

It sounds like congratulations are in order! I will be eager to learn about what this new offered job is all about, and am happy to know that our paths will cross again. Best wishes to you Ex. 7 and I hope your repatriation into German culture---after your years in America—goes smoothly.

Machts gut,

Chris

From: Ex. 7 @vw.com]
Sent: Friday, February 27, 2015 3:56 PM
To: Grundler, Christopher
Subject: Good Bye

Hello Chris,

I just wanted to send you a personal note to say Good Bye.

Unfortunately I have to return earlier to Wolfsburg than I wanted to, but when I got asked the question if I would take the offered job I could only answer "Yes" or Yes, please".

I wanted to thank your for your openness and approachability in all our conversions and with my new role I am 100% sure our path will cross again.

I really enjoyed working with you compared to your predecessor.

Ex. 7

Ex. 7

Engineering and Environmental Office

VOLKSWAGEN **Group of America, Inc.**

3800 Hamlin Road
Auburn Hills, MI 48326

Ex. 7

To: Olechiw, Michael[olechiw.michael@epa.gov]
From: Grundler, Christopher
Sent: Wed 7/22/2015 8:02:14 PM
Subject: Has VW sent their briefing materials in yet?

Cc: Olechiw, Michael[olechiw.michael@epa.gov]; Charmley, William[charmley.william@epa.gov]; Moran, Robin[moran.robin@epa.gov]
To: Bolon, Kevin[Bolon.Kevin@epa.gov]
From: Grundler, Christopher
Sent: Wed 7/22/2015 9:27:30 PM
Subject: Re: VW Key Messages and NAS Summary

Great. Thanks for pulling this together for me

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Jul 22, 2015, at 5:26 PM, Bolon, Kevin <Bolon.Kevin@epa.gov> wrote:

> Chris,
>
> I've highlighted some of the key text regarding the MTE from the FRM preamble in the attached Word doc. Incorporating feedback, evaluating appropriateness of the standards, recognizing the importance of the National Program are all in there, along with the list of 10 specific topics that will be evaluated.
>
> The Excel file has a few of the relevant tables from the 2013MY GHG Performance Report for VW. Table 3-1 shows their very modest reductions in GHG emissions from 2012 to 2013. Table 3-28 shows they are 1g/mile over their compliance value, which is shown graphically in ES2.
>
> -Kevin
>
> **From:** Olechiw, Michael
> **Sent:** Wednesday, July 22, 2015 4:47 PM
> **To:** Grundler, Christopher
> **Cc:** Charmley, William; Bolon, Kevin; Moran, Robin
> **Subject:** VW Key Messages and NAS Summary

Chris,

Please find attached the key messages and the executive summary of the NAS report.

Kevin will be sending you the preamble text regarding the MTE and the VW GHG performance data in a separate email.

Mike

From: Grundler, Christopher
Sent: Wednesday, July 22, 2015 4:20 PM
To: Olechiw, Michael
Subject: I also need the Exec Summary of the NAS report. Thanks

<MTE description - Text Extracts from 2017-2025 LD GHG FRM Preamble.docx>

<VW key tables_ghg-report-2013-data-tables.xlsx>

From: Olechiw, Michael
Required Attendees: Barba, Daniel; Bolon, Kevin; Neam, Anthony; Cherry, Jeff; Lee, Soduk; Grundler, Christopher; Moran, Robin; Ex. 7 Jim Tamm (james.tamm@dot.gov); Schenk, Charles; Caffrey, Cheryl; Nam, Ed; Charmley, William; McDonald, Joseph; McCarthy, Ex. 7 Moskalik, Andrew
Optional Attendees: Ex. 7 Ken.Katz@dot.gov; Ex. 7 John.Whitefoot@dot.gov; Lavery, Ex. 7
Location: AA-Room-Office-C126-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: 3-agency meeting with VW regarding MTE
Categories: Purple Category
Start Date/Time: Thur 7/23/2015 1:00:00 PM
End Date/Time: Thur 7/23/2015 7:00:00 PM

Volkswagen has decided to use a WEBEX for today's meeting.

→ Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

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+1 (855) 858-8080 (Auburn Hills)	English (United States)
+1 (248) 630-0170 (Auburn Hills)	English (United States)
+1 (248) 754-5055 (Auburn Hills)	English (United States)

Find a local number

Conference ID: Ex. 7

Forgot your dial-in PIN? | Help

[IOC([1033])!]

Agenda

1 Introducing Volkswagen Group

2 GHG I: Volkswagen Group's commitment to the US market 2012-2016

- 2.1 Volkswagen Group's fleet composition
- 2.2 Volkswagen Group's strategy on technologies for the US market
- 2.3 Updated GHG status Volkswagen Group

3 GHG II: Looking forward to 2017-2025

- 3.1 Compliance Outlook Volkswagen Group
- 3.2 Further technologies to be implemented by Volkswagen Group
- 3.3 Barriers in the US for a target achievement

4 Volkswagen Group's proposals for Mid-Term Review

- 4.1 Importance of flexibilities and proposed adjustments on GHG II
- 4.2 Comments on NAS Study
- 4.3 What lies ahead after 2025

5 Guided Tour through Laboratories

VW FOIA, EPA 06/20/2017 2017-FFP_021494

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Olechiw, Michael
Sent: Thur 7/23/2015 11:17:30 AM
Subject: RE: VW Materials

Yes, you are correct.

Mike

From: Grundler, Christopher
Sent: Thursday, July 23, 2015 7:17 AM
To: Olechiw, Michael
Subject: Re: VW Materials

The meeting is in the lobby, amirite?

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Jul 23, 2015, at 7:14 AM, Olechiw, Michael <olechiw.michael@epa.gov> wrote:

> Colleagues,
>
> VW has decided to not send us materials in advance. There is now a web meeting set-up.
>
> Mike

From: Wehrly, Linc
Location: ARB Conference Room EXC (AN1)
Importance: Normal
Subject: Accepted: EPA – ARB In-Use VW Diesel Passenger Vehicles
Start Date/Time: Thur 7/23/2015 6:00:00 PM
End Date/Time: Thur 7/23/2015 7:00:00 PM

To: Caldwell, Amy[caldwell.amy@epa.gov]; Wasenko, Barbara[Wasenko.Barbara@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Betty Stendel[stendel.betty@epa.gov]; Kolowich, Bruce[kolowich.bruce@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Mylan, Christopher[Mylan.Christopher@epa.gov]; Haugen, David[haugen.david@epa.gov]; Miller, Debra L.[Miller.DebraL@epa.gov]; Watkins, Erica[Watkins.Erica@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Galano, Fidel[Galano.Fidel@epa.gov]; Johnson, Francene[Johnson.Francene@epa.gov]; Stewart, Gwen[Stewart.Gwen@epa.gov]; Jones, Jacqueline[Jones.Jacqueline@epa.gov]; Blubaugh, Jim[Blubaugh.Jim@epa.gov]; Weihrauch, John[Weihrauch.John@epa.gov]; Iffland, JoNell[Iffland.JoNell@epa.gov]; Berrier, Judi[Berrier.Judi@epa.gov]; Greuel, Justin[Greuel.Justin@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Sargeant, Kathryn[sargeant.kathryn@epa.gov]; Vawters, Katie[Vawters.Katie@epa.gov]; Derksen, Kimberly[derksen.kimberly@epa.gov]; Cook, Leila[cook.leila@epa.gov]; McQueen, Lyndia[mcqueen.lyndia@epa.gov]; Le, Madison[Le.Madison@epa.gov]; Peralta, Maria[Peralta.Maria@epa.gov]; Brusstar, Matt[brusstar.matt@epa.gov]; Horowitz, Michael[horowitz.michael@epa.gov]; Sabourin, Michael[sabourin.michael@epa.gov]; Haley, Mike[Haley.Mike@epa.gov]; Cooper, Nanette[cooper.nanette@epa.gov]; Paff, Patricia[paff.patricia@epa.gov]; Shaffer, Patricia[Shaffer.Patricia@epa.gov]; Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]; Curtis, Rhonda[Curtis.Rhonda@epa.gov]; Larson, Robert[larson.robert@epa.gov]; Waite, Sherry[waite.sherry@epa.gov]; Patterson, Susan[Patterson.Susan@epa.gov]; Nelson, Suzanne[nelson.suzanne@epa.gov]; Meekins, Tanya[Meekins.Tanya@epa.gov]; Moore, Theresa[Moore.Theresa@epa.gov]; Bradish, Tracey[bradish.tracey@epa.gov]
From: Stewart, Gwen
Sent: Thur 7/23/2015 12:11:24 PM
Subject: Grundler, Christopher Calendar
Grundler Christopher Calendar.ics

CHRISTOPHER GRUNDLER

CALENDAR

THURSDAY, JULY 23, 2015

AA OFFICE

9:00 AM – 3:00 PM	3-Agency Meeting with VW regarding MTE Location: RM. C-126 AA
3:15 PM – 3:55 PM	Valero Energy Location: RM. 6520 DC/RM. C-174 DOD AA
4:00 PM – 5:00 PM	Conference Call: Bill Ross By Telephone: Bill will initiate call to Chris on: **Non-Responsive**

Gwen Stewart

Office of Transportation and Air Quality

202 564-1682 – Telephone

202 564-1686 – Fax Number

Stewart.gwen@epa.gov

To: Sohacki, Lynn[sohacki.lynn@epa.gov]; Liebner, Bernd[liebner.bernd@epa.gov]
From: Glas, Tobias
Sent: Thur 7/23/2015 12:21:08 PM
Subject: RE: Parameters needed for V149RXX-0308
V149RXX-0308.xlsx

Hi Lynn, hi Bernd,

Here is the information for today's car.

See you later

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

From: Sohacki, Lynn [mailto:sohacki.lynn@epa.gov]
Sent: Thursday, July 16, 2015 10:05 AM
To: Glas, Tobias
Subject: Parameters needed for V149RXX-0308

Hi, Tobias.

The following vehicle will be brought in next week:

V149RXX-0308 (2013 VW/Jetta TDI (diesel) – Ex. 6, 07/23/15 (Thursday) 0930 Vehicle Pick up

Please fill the attached parameter sheet (including the new second tab) and return it to me. When including instructions for disabling traction control, please include a description and location of the icon.

Thanks,

Lynn Sohacki

EPA, Compliance Division

734-214-4851

updated 1-21-2015

National Vehicle and Fuel Emissions Laboratory

2565 Plymouth Road, Ann Arbor, Michigan 48105

EPA Parameters Form 1000-01 for In-Use Testing

EPA Vehicle Control Number: V149RXX-0308

Equivalent Test Weight: 3500 Pounds (Integer Only: Equivalent Test Weight)

Nominal Fuel Tank Capacity: 14.5 Gallons **40% Fill** 5.8 Gallons

Drive Axle: 11

US06 CO Full Useful Life Standard

7 Rear Drive Off Road
9 Other
10 4-Wheel Drive
11 2-Wheel Drive, Front
12 2-Wheel Drive, Rear
13 Part-time 4-Wheel Drive
15 All Wheel Drive

Mfr. Shift Schedule (if required) FTP HWY US06

Vehicle Target Road-Load Coefficients

A 33.00 Lb-force

B 0.2900 Lb-force/mph

C 0.01660 Lb-force/mph^2

Canister Working Capacity:

Grams (Integer Only: Canister Working Capacity)

Number of Canisters (Integer Only: Number of Canisters)

Total Canister Volume (cm3)

PLEASE ADD COLD CO PARAMETERS ON THE SECOND TAB OF THIS WORKSHEET

Vehicle Starting Instructions, including Traction Control disabling (with location and description of traction control icon):

Turn key to start, press ESP button right after engine start

To avoid unnecessary delays, please provide specific instructions and pictures (if necessary) for the following items:

Canister Loading Process: Nope

Fuel Draining Process: Put a T piece into the fuel line and run engine until almost empty. I sent Marc a picture where to put the T piece.

ABS Disabling Process: Push button ESP button in the center console under the air control unit.

Fuel Switch Process (Flex Fuel only):

Comments:

For internal EPA Use Only:

This information was obtained from:

* Letter, e-mail, fax or other document delivered from the manufacturer *(attach any additional information from the manufacturer to this form)*
* Verbal instruction from the manufacturer's representative
* Other (specify)

Config. No

Manufacturer Representative: _____ *Date:* _____

Jacobs Representative: _____ *Date:* _____

EPA Representative: _____ *Date:* _____

National Vehicle and Fuel Emissions Laboratory
2565 Plymouth Road, Ann Arbor, Michigan 48105

EPA Parameters Form 1000-01 for In-Use Testing

EPA Vehicle Control Number: V149RXX-0308

Cold CO Target Road-Load Coefficients

A _____ Lb-force

B _____ Lb-force/mph

C _____ Lb-force/mph^2

Cold CO Test

Special Instructions for Heater and Defroster Control:

From: Snyder, Jim
Location: ARB Conference Room EXC (AN1)
Importance: Normal
Subject: Accepted: EPA – ARB In-Use VW Diesel Passenger Vehicles
Start Date/Time: Thur 7/23/2015 6:00:00 PM
End Date/Time: Thur 7/23/2015 7:00:00 PM

To: Giles, Michael (EEO)[michael.giles@vw.com]
From: Snyder, Jim
Sent: Thur 7/23/2015 5:04:22 PM
Subject: FW: Diesel nicknames

From: Snyder, Jim
Sent: Wednesday, July 22, 2015 3:32 PM
To: 'Rodgers, William (EEO)'
Subject: Diesel nicknames

Hi Bill, can you clarify the 4 cylinder Diesel engine naming? I'm hearing new and next gen, and gen 3 kicked around, , it may be confusing

Prior to 2013 MY there was the TDi with NOX adsorber (Gen 1?)

For 2013 MY a new version with SCR was available in the Passat only. (Gen 2?, new Gen?)

For 2014MY the SCR version expanded to Golf, Jetta, and Beetle.

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For 2016MY, I'm testing a carryover version in a Golf right now.

I know you call the latest gasoline TFSI engine the "Gen III" but Carb is calling the latest diesel that too.

And this doesn't cover the Audi V6s…

Jim Snyder

Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Giles, Michael (EEO)
Sent: Thur 7/23/2015 5:15:53 PM
Subject: RE: Diesel nicknames

Hi Jim,

As we discussed, Passat with SCR began in MY 2012.

The other models were non SCR until MY 2015, when all models have SCR and in addition the 288 generation was introduced.

Regards,

Mike

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, July 23, 2015 1:04 PM
To: Giles, Michael (EEO)
Subject: FW: Diesel nicknames

From: Snyder, Jim
Sent: Wednesday, July 22, 2015 3:32 PM
To: 'Rodgers, William (EEO)'
Subject: Diesel nicknames

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And this doesn't cover the Audi V6s…

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Wehrly, Linc
Location: ARB Conference Room EXC (AN1)
Importance: Normal
Subject: Accepted: EPA – ARB In-Use VW Diesel Passenger Vehicles
Start Date/Time: Thur 7/23/2015 6:00:00 PM
End Date/Time: Thur 7/23/2015 7:00:00 PM

To: Ex. 7
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7
Sent: Thur 7/23/2015 5:44:50 PM
Subject: RE: EPA – ARB In-Use VW Diesel Passenger Vehicles

FYI – EPA folks.

We just added the presentations and conference call numbers to the meeting notice.

-----Original Appointment-----
From: Ex. 7
Sent: Thursday, July 23, 2015 10:41 AM
To: Ex. 7
Ex. 7
Ex. 7 Ball.Joel@epamail.epa.gov; 'Good.David@epamail.epa.gov'; 'wehrly.linc@epamail.epa.gov';
Ex. 7
Cc: 'Snyder, Jim'; 'Wehrly, Linc'; Ex. 7
Subject: EPA – ARB In-Use VW Diesel Passenger Vehicles
When: Thursday, July 23, 2015 11:00 AM-12:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: ARB Conference Room EXC (AN1)

EPA – ARB Meeting on the In-Use Compliance Program Evaluation of Strategies On Certified On-road VW Diesel Vehicles

ORGANIZER: Ex. 7

ECARSD INVITEES: Ex. 7

Ex. 7

Non-ARB INVITEES: Joel Ball, David Good, and Linc Wehrly from EPA

VISITOR'S CENTER ESCORT/ARB CONTACT: Ex. 7
Ex. 7

MEETING PURPOSE: To present EPA some data on the current program that ARB is conducting (on-road and lab emissions) on Gen 2 VW diesel passenger vehicles, and discus concerns regarding Gen 1 and 3 vehicles.

CONFERENCE ROOM: El Monte – Annex 1 Executive Conference Room

Toll Free number: 888-566-6184

<< File: 1Q1502 In-Use Emission Testing of LD-Diesel Vehicles Preliminary Data for EPA 20150723.pdf >>

<< File: ARB EPA meeting OBD presentation 23 July 15.pdf >>

Participant passcode: Non-Responsive

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: NGV Journal
Sent: Thur 7/23/2015 6:44:51 PM
Subject: News of the day

Ver Online

Germany: power-to-gas plant stabilizes public energy grid

In the German electrical energy mix, the share of renewable energies is growing rapidly. However, regional expansion of wind and photovoltaic generation plants leads to increasingly larger load fluctuations – it is therefore important to have flexibly available consumers such as the Audi e-gas plant in the city of Werlte to buffer load peaks and thereby stabilize public (...)

Volkswagen develops 'V-Charge' system for electric vehicles

A look into the near future of automated parking is given by 'V-Charge' (Valet Charge), an EU research project, in which six national and international partners are jointly developing new technologies. Its focus is on automating the search for a parking space within defined zones, such as multi-storey car park, with electric charging infrastructure. Once the charging process (...)

Lloyd's Register helps speed up LNG adoption in US shipping

Lloyd's Register North America, Inc. (LR) has teamed with Penn Oak Energy Corp to help companies raise much needed capital and mitigate the technical risks associated with retrofitting ships fueled by liquid natural gas, by providing a one-stop-shop solution to the industry. Compared with heavy bunker oil and even low-sulphur marine diesel, LNG-powered vessels can greatly reduce operating (...)

Contact Us

info@ngvjournal.com

+54 11 4307 4559/5201

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Desuscribirme | **Reportar por spam**

To: Ex. 7 @vw.com]
From: Grundler, Christopher
Sent: Thur 7/23/2015 9:15:07 PM
Subject: Thanks

Ex. 7 –thanks again for a very productive discussion today. I saw you drive off --- cool truck! You should build them and sell them in NA!

From: Kata, Leonard (EEO)
Location: Telephone
Importance: Normal
Subject: SIL Shift Speeds
Start Date/Time: Fri 7/24/2015 2:00:00 PM
End Date/Time: Fri 7/24/2015 2:30:00 PM

.....
,,,,,,
Hello Jim:
I communicated your position regarding the Volkswagen 1.4L manual shift speeds w/SIL to my colleagues at Volkswagen AG. They would still like to speak with you, if possible. Therefore, I have set up a brief telephone conference for tomorrow. I know that this is on the spur of the moment, so if the time doesn't work, please let me know. I will watch my e-mail and can contact Germany early tomorrow.
Len

Join Skype Meeting

Non-Responsive

From: Kata, Leonard (EEO)
Location: Telephone
Importance: Normal
Subject: SIL Shift Speeds
Start Date/Time: Fri 7/24/2015 2:00:00 PM
End Date/Time: Fri 7/24/2015 2:30:00 PM

.....
,,,,,,
Hello Jim:
I communicated your position regarding the Volkswagen 1.4L manual shift speeds w/SIL to my colleagues at Volkswagen AG. They would still like to speak with you, if possible. Therefore, I have set up a brief telephone conference for tomorrow. I know that this is on the spur of the moment, so if the time doesn't work, please let me know. I will watch my e-mail and can contact Germany early tomorrow.
Len

.....

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

Non-Responsive

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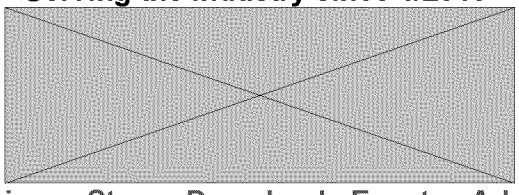
.....

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Shmuel De Leon Energy
Sent: Thur 7/23/2015 10:17:53 PM
Subject: Shmuel De-Leon Energy Storage Newsletter - 26/7/2015 - No. 290

Shmuel De-Leon Batteries, Super-capacitors, Fuel cells & EV`s Weekly Newsletter

July 26th, 2015, No. 290
Sent to more than 125,000 industry members
Serving the industry since 1/2010



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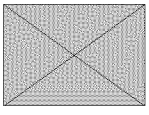
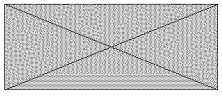
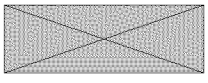
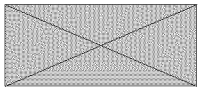
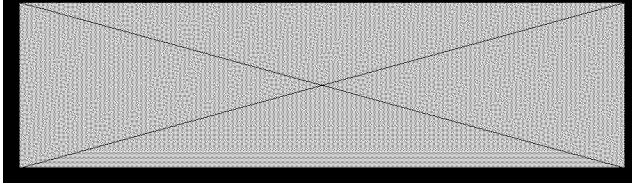








Battery News



www.pneumaticoat.com Phone: 303-459-3810 E-mail: sales@pneumaticoat.com

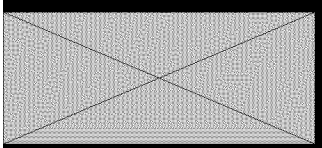
Saft Li-ion battery to power the ExoMars Rover as it searches for life on the red planet

Nissan to buy LG Chem Batteries, confirms CEO Carlos Ghosn

Samsung SDI + LG Chem Top Recent Business Assessment Of Lithium-Ion Battery Manufacturers

Electrochemical Society and Toyota announce fellowship winners for projects in green energy technology

Albemarle (ALB) Plans Transfer of n-Butyllithium Production to Germany, Taiwan



sales@neicorporation.com
http://neicorporation.com/products/batteries/

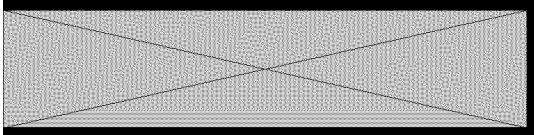
New curly MnOx nanomembrane cathode for high-performance Li-O2 battery; improved stability

LG Chem to Sell Off Secondary Battery Separator Production Facilities

e-smartConnect: Volkswagen is conducting research on an automated quick-charging system for the next generation of electric vehicles

Kettering University researchers working on more efficient Level 2 charger for HELLA

FreeWire Partners with Siemens to Make EV Charging for Businesses Easier and Faster to Deploy



www.arbin.com
antony.p@arbin.com

Total hydrogen station in Munich first to feature standard compressed H2 and BMW cryo-compressed H2 technology

FuelCell Energy Advancing Solid Oxide Fuel Cell Commercialization for Power Generation, Electrolysis and Hydrogen Production and Storage Applications

High-performance flexible supercapacitors could power your next smartwatch

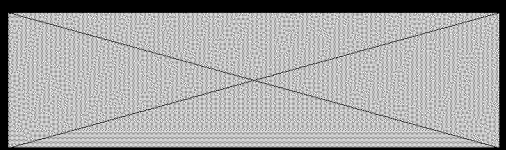
Supercapacitors reveal their secrets

Richardson Electronics, Ltd. and Ioxus, Inc. Sign Global Distribution Agreement

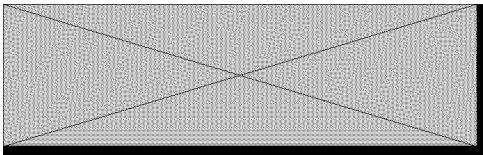
Shmuel De-Leon Energy is looking for partners in Finland, Sweden, Canada, Japan, Korea, China to host and partner on its

The Batteries, Fuel Cells, Super Capacitors & EV Seminar
Seminars Web Site

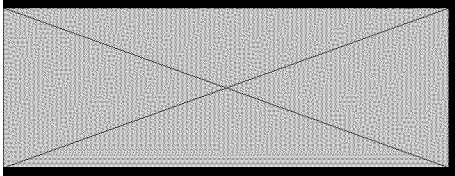
Schedule	Location	Partner	Program	Registration
27/5/2015	Oslo, Norway			



Shmuel De-Leon Energy, Ltd. Mazal-Arie 10, Hod-Hasharon,



www.cnibf.net



BATTERY OSAKA, September 3nd-4th, 2015, is a specialised exhibition newly launched in 2014 for manufacturing and R&D of rechargeable batteries. All kinds of materials, manufacturing technologies, inspection/analysis equipment related to rechargeable batteries will be gathering. For exhibiting and visiting inquiries: bj-o@reedexpo.co.jp

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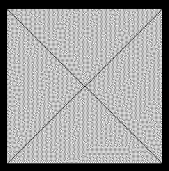
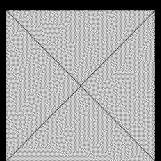


4th International Secondary Lead Conference, 7-8 September 2015, Centara Grand @ CentralWorld and Bangkok Convention Centre.
This biennial Conference is Asia's leading exchange for secondary lead producers, suppliers, markets and lead-acid battery recyclers. The Conference will provide a remarkable opportunity for all segments of the industry to meet and discuss the many topics affecting the industry. Emphasis will also be placed on the market conditions and what role secondary plays in the overall lead market. wwwsecondaryleadconference.com



16th Asian Battery Conference and Exhibition, 8 - 11 September 2015, Centara Grand @ CentralWorld and Bangkok Convention Centre. 16ABC will see the largest and most important assembly of battery industry experts gather in Bangkok for what is the premier lead battery industry event in Asia. Participate in a sparked-up show with an interactive and lively exhibition, a program that showcases presentations from global experts in battery technology, science and business and ramped-up social events. www.asianbatteryconference.com

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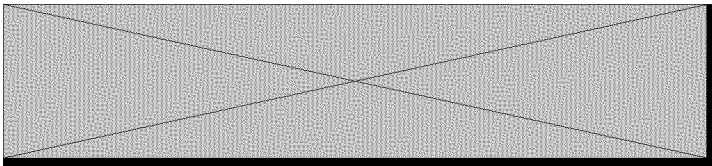
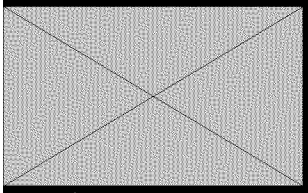
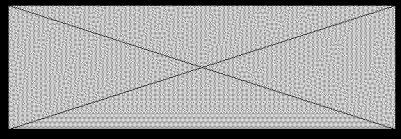
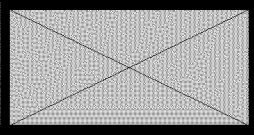


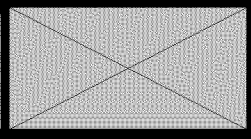
Taking place September 15-17, 2015, in Novi, Detroit, Michigan, The Battery Show 2015 is the premier showcase of the latest advanced battery technology. The exhibition hall offers a platform to launch new products, make new contacts and maintain existing relationships. With more qualified buyers and decision makers than any other event in North America, The Battery Show 2015 is the key to unlocking your future business opportunities.

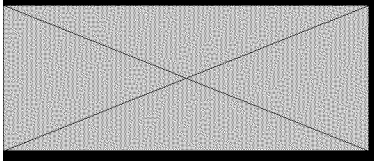


Join the only technical conference where the automotive and renewable industries come together to ensure business growth. With the growth of the electric vehicles' market and the shift to cleaner energy, batteries have become the common denominator for the automotive and renewable industry. Take this unique opportunity to meet experts from around the world. Visit the website for more information.

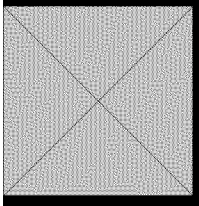




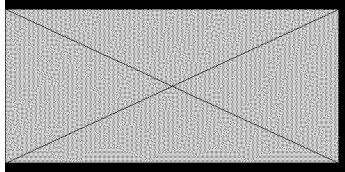




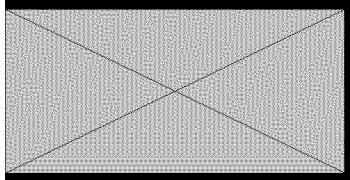
The 2nd edition of the World Electric & Hybrid Boat Summit will take place from 30th September till 2nd October 2015 in Amsterdam, followed by a study tour in Friesland. PlugBoat aims at providing a premier & high quality global platform to foster exchange of views and development of synergies between players in the field of electric & hybrid boats for sport and inland water transportation. Info



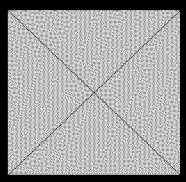
"Battery Shanghai"



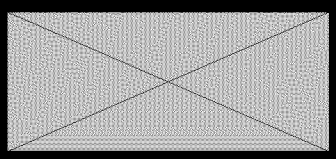
Batteries 2015 is taking place 7-9 October 2015, Nice France. Christophe Pillot will be also handling his 2nd edition of his tutorial on "The Rechargeable Battery Market: value chain and main trends 2014 - 2025" on October 6th 2015. Batteries 2015 will include 3 days of technical sessions with 70 high level speakers, poster sessions, networking cocktail & dinner and a 2000 m² exhibit area. Contact : Sonia Jouneau - Tel : +33 1 41 34 21 75 - Email : sjouneau@lepublicsysteme.fr



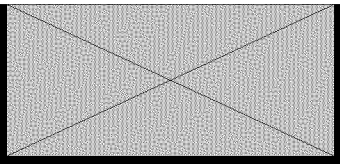
www.interbattery.or.kr



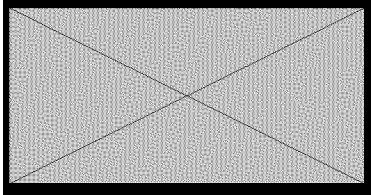
This year, the World Mobility Conference takes place alongside the eCarTec Munich 2015 and MATERIALICA 2015 trade fairs from October 20 - 22, 2015 (at Messe München). On 22 October, 2015 from 9:30 am - 05:00 pm the conference agenda will include a session about Electric Vehicle Batteries with 12 leading speakers on the topics of electric vehicles and electric vehicle batteries. It will be moderated by Mr. Shmuel De Leon from Shmuel De Leon Energy. Further information available at



Fuel Cell Seminar and Energy Exposition - November 16-19, 2015

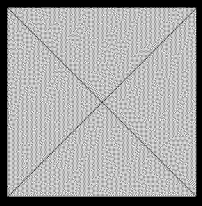


ees™ is the international exhibition series for batteries, energy storage systems and innovative production. ees Europe is Europe's largest energy storage event taking place in Munich in conjunction with Intersolar Europe on June 10-12, the world's leading exhibition for the solar industry. Furthermore ees™ North America and ees India are highlighted as Special Exhibitions at the Intersolar events in San Francisco on July 14-16 and Mumbai on November 18-20 - the major platforms for energy storage technologies reshaping the energy sector.

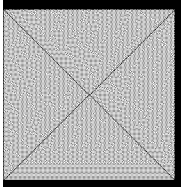


The 4th edition of the European Electric & Hybrid Vehicle Congress will take place from 1st to 4th December 2015 in Brussels. With over 200 presentations to be made, EEVC 2014 strengthens its position as global platform to foster exchange of views between the researchers, the industry, the authorities, the end users and the NGO's in the field of eMobility.

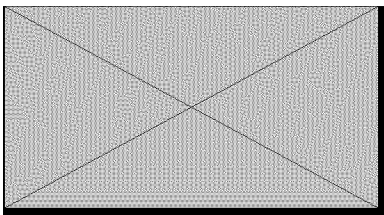
Info: www.eevc.eu ,



Energy Storage India (ESI) is the leading conference and expo addressing the need for energy storage and microgrid solutions in India. The 3rd International Conference & Exhibition, which is scheduled from December 08 - 09, 2015 along with a Pre-Conference workshop on December 07, 2015 at India Habitat Centre, New Delhi. The 2-day conference program would be concentrating on interactive markets with the topic "New Era for India's Energy Infrastructure through Energy Storage and Microgrids" . Url

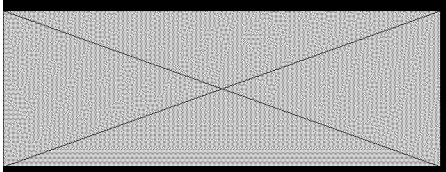


www.europeanfuelcell.it



jgreenberger@naatbatt.org

http://naatbatt.org/naatbatt-annual-conference



Shmuel De-Leon Energy, Ltd. Mazal-Arie 10, Hod-Hasharon, 45309 Israel
http://www.sdle.co.il http://www.batteriesdatabase.com
shmuel@sdle.co.il, Tel/Fax: 972-77-5010792
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Shmuel De Leon Energy | Mazal-Arie 10 | Hod-Hasharon | 45309 | Israel

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: SEMA eNews
Sent: Thur 7/23/2015 10:23:29 PM
Subject: SEMA eNews, Vol. 18, No. 30

View Online

Vol. 18, No. 30
July 23, 2015

Collector Car Appreciation Day Honored by Our Industry

On July 10, 2015, SEMA members joined with car clubs and thousands of enthusiasts to celebrate the sixth annual Collector Car Appreciation Day (CCAD).

read more

// Breaking News

2016 Audi TT Coupe, S3 Sedan Measuring Session Next Week—Sign Up Now!

In partnership with Audi USA, the SEMA Garage will introduce two all-new vehicles for 2016—the Audi TT Coupe and Audi S3 Sedan.

read more

SEMA Show Publications: Opportunities and Deadlines

Getting coverage in SEMA's pre-Show publications starts with a simple press release.

read more

// Business Tools

2015 SEMA Market Study—New Consumer Data Highlights Retail Trends, Product Demand

The *2015 SEMA Market Report* features a new source of data based on consumer responses that will help members to identify and track product trends in the specialty-equipment market.

read more

Honor Top Individuals, Companies and Products in Your Segment

Nominations for SEMA's council and network awards are being accepted now through August 7.

read more

How SEMA Education Can Help You Better Perform Your Job

As the 2015 SEMA Show draws closer, it's time to start digging into the educational offerings available.

read more

Job-Hunting? Top Automotive Jobs Here

Are you hunting for a new job? The "Positions Available" section in the SEMA Member Classifieds lists more than 50 job openings around the country.

read more

// New Products & Technology

Spy Shots—2017 Chevy Bolt EV

The '17 Chevrolet Bolt is the all-electric, high-roofed car previewed in January at the Detroit Auto Show alongside the redesigned '16 Volt, and the second prong in GM's electrification strategy.

read more

// Law & Order

Michigan Bill Increases First Registration Fees by $100

Legislation to increase the initial registration and transfer registration tax by $100 was introduced.

read more

Michigan Considers Implementing Road User Fee

Legislation has been introduced to require the state to charge and collect a user fee from each registrant of a motor vehicle.

read more

Several Provinces Proclaim July 2015 as "Automotive Heritage Month"

Thanks to the efforts of the National Association of Automobile Clubs of Canada, New Brunswick, Newfoundland and Labrador, Prince Edward Island and Saskatchewan have each issued a proclamation designating July 2015 as "Automotive Heritage Month."

read more

U.S. Senate Committee Passes Business-Friendly Tax Extenders Legislation

The U.S. Senate Finance Committee passed legislation to extend tax breaks of key importance to SEMA members.

read more

EPA Phases-Out HFC-134a as an Air-Conditioning System Refrigerant

The U.S. Environmental Protection Agency (EPA) has issued a final rule to ban the use of HFC-134a as a motor-vehicle air-conditioning system refrigerant starting with model-year (MY) 2021 new vehicles.

read more

// Global Update

Center of International Commerce: Services, Interpreters to Create Export Opportunities

The Center of International Commerce (CIC) is open throughout the entire week of the SEMA Show to

provide exhibitors and international buyers with services and amenities to make connections and conduct business.

read more

// People, Places & Racing News

Racing News: Schwartz Wins Both Classes in 2015 Car Craft Real Street Eliminator

Schwartz Performance won both classes at the 2015 Car Craft Real Street Eliminator Pro/Am Invitational during the Summer Nationals in Milwaukee.

read more

Movers & Shakers: Tire Group International Hires Jeff DeVonde; Kahn Media Announces New Hires

Here is a brief look at some of the news and updates from around the specialty-equipment industry.

read more

Council & Network News: Display Your Truck or Jeep at the SEMA Show and Support SEMA Cares

At this year's SEMA Show, the Light Truck Accessory Alliance will display several vehicles between the South Hall Las Vegas Convention Center and the new Performance Pavilion.

read more

// Shows & Events

Press Conference Application Deadline Approaching

The deadline to apply for a press conference at the 2015 SEMA Show is Friday, July 31.

read more

2015 SEMA Show First-Time Exhibitors—Racing & Performance

Each year, hundreds of new companies attend the SEMA Show for the first time, providing buyers access to more companies and products to meet the demands of their customers.

read more

Latest Product News From the SEMA Show Online Media Center

Check out what these exhibitors have announced for this year's Show and stay up to date on all exhibitor-related news and announcements at www.SEMAShow.com/press.

read more

Expand Your Brand Beyond Your Booth

Companies looking to gain additional exposure at the SEMA Show can take advantage of low-cost, high-value sponsorship opportunities available.

read more

Video: So-Cal's Pete Chapouris—Why Concept to Reality Is Faster in Today's Market

So-Cal Speed Shop's President and SEMA Hall of Fame Member Pete Chapouris discusses several projects, and how today's technology and builders turn ideas into reality faster than ever before.

read more

Your Chance to Win Transamerican Auto Parts' SEMA Vehicle Build Award

Transamerican Auto Parts will introduce the "Life is Better Off-Road" SEMA Builder Award at the 2015 SEMA Show in Las Vegas.

read more

Exhibitors Offering Products to 2015 SEMA Show Builders

Exhibitors of the 2015 SEMA Show are invited to expand their reach, product exposure and Show-floor presence by offering products to builders through this list.

read more

Behind the Scenes: SEMA Battle of the Builders

Check out this behind-the-scenes video of 2014 Battle of the Builders participant Michael Duff and his '68 Ford Bronco.

read more

Business Services Exhibitors: Meet Sales Rep Brian Paik

As 2015 SEMA Show exhibitors plan and prepare for the upcoming SEMA Show, designated account reps are available to help companies navigate the SEMA Show process.

read more

Mark Your Calendars

Following are dates and locations for several upcoming SEMA-sponsored shows, webinars and activities.

read more

- Accel
- Addco
- Advanced Clutch
- Impact Canopies
- RaceQuip
- T-Rex
- Access Cover
- Adenna
- Advantage Truck Accessories

// **Classifieds**

- Katana Wheels
- Spectre
- Industry Classifieds

SEMA eNews is published each Thursday afternoon by SEMA, the Specialty Equipment Market Association, and is distributed to SEMA members and industry professionals in the specialty-equipment market.

Questions, comments or suggestions about the publication: Contact editors@sema.org.

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1575 Valley Vista Dr, Diamond Bar, CA, 91765, USA

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Ex. 7 (EEO)
Sent: Fri 7/24/2015 1:04:25 PM
Subject: RE: Thanks

Hello Chris,

Thank you for the meeting as well. I thought it was a good discussion.

I'm really frustrated about the truck. I'm kind of a truck guy and love vintage trucks. I've been pushing the truck idea for years. Not because of GHG but because I really thought there was a market for it. I didn't believe all the talk about the small or mid-size truck market dying off. I thought it was a perfect niche for us to enter. Now I think we missed the opportunity. GM can't build enough Colorados.

This is one of the products that should be in Chattanooga.

Thank you to the entire staff for a productive meeting.

Ex. 7

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Thursday, July 23, 2015 5:15 PM
To: Ex. 7 (EEO)
Subject: Thanks

Ex. 7—thanks again for a very productive discussion today. I saw you drive off --- cool truck! You should build them and sell them in NA!

To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Gordinier, Terry[Gordinier.Terry@epa.gov]
From: Allen, Gregory (EEO)
Sent: Fri 7/24/2015 1:16:07 PM
Subject: RE: VW370-4-0145/16

Hello Vince,

Has the vehicle mentioned below been released?

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Allen, Gregory (EEO)
Sent: Thursday, July 23, 2015 2:50 PM
To: Mazaitis, Vincent
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW370-4-0145/16

Hello Vince,

Please release the VW Jetta TDI (actual vehicle is Golf) referenced in the subject line above for pick up. We will be having a carrier pick-up the vehicle tomorrow. Please let me know if you have any questions/concerns with this.

To my knowledge, Richard Thomas has already spoken with Ben Haynes on the carrier pick up details.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Wehrly, Linc[wehrly.linc@epa.gov]
Cc: Gordinier, Terry[Gordinier.Terry@epa.gov]; Maurice Hicks[maurice.hicks@dot.gov]; Tom Letkiewicz[t.letkiewicz.ctr@dot.gov]
From: Good, David
Sent: Fri 7/24/2015 1:55:00 PM
Subject: 2014 CAFE/GHG - There are 4 CAFE/GHG letters in the signing queue (Mazda car & truck, VW Group car & truck) NNTO

To: Tobias.Glas@vw.com[Tobias.Glas@vw.com]
From: Sohacki, Lynn
Sent: Fri 7/24/2015 1:57:45 PM
Subject: Test data for V149RXX-0097
V149RXX-0097 FTP PM.pdf
V149RXX-0097 FTP.pdf
V149RXX-0097 HWY.pdf
V149RXX-0097 US06 PM.pdf
V149RXX-0097 US06.pdf

Hi, Tobias,

Test data for the above vehicle is attached. Please let me know if you have any questions.

Regards,

Lynn Sohacki

Environmental Engineer

Compliance Division

EPA

734-214-4851

To: Sohacki, Lynn[sohacki.lynn@epa.gov]
From: Glas, Tobias
Sent: Fri 7/24/2015 2:21:29 PM
Subject: RE: Test data for V149RXX-0097

Hi Lynn,

Thanks, everything looks good to me.

I'll be out of the office next week but there should not be any more cars to inspect anyway.

Looking forward to get more passing results from you.

Have a nice weekend

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

From: Sohacki, Lynn [mailto:sohacki.lynn@epa.gov]
Sent: Friday, July 24, 2015 9:58 AM
To: Glas, Tobias
Subject: Test data for V149RXX-0097

Hi, Tobias,

Test data for the above vehicle is attached. Please let me know if you have any questions.

Regards,

Lynn Sohacki

Environmental Engineer

Compliance Division

EPA

734-214-4851

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Sohacki, Lynn
Sent: Fri 7/24/2015 2:23:05 PM
Subject: RE: Test data for V149RXX-0097

Thanks, Tobias. If you are on vacation next week, I hope that you have a good time.

You enjoy your weekend as well.

Lynn

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
Sent: Friday, July 24, 2015 10:21 AM
To: Sohacki, Lynn
Subject: RE: Test data for V149RXX-0097

Hi Lynn,

Thanks, everything looks good to me.

I'll be out of the office next week but there should not be any more cars to inspect anyway.

Looking forward to get more passing results from you.

Have a nice weekend

Tobias Glas

In-Use Emission Compliance Specialist

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Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

From: Sohacki, Lynn [mailto:sohacki.lynn@epa.gov]
Sent: Friday, July 24, 2015 9:58 AM
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Subject: Test data for V149RXX-0097

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Test data for the above vehicle is attached. Please let me know if you have any questions.

Regards,

Lynn Sohacki

Environmental Engineer

Compliance Division

EPA

734-214-4851

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Fri 7/24/2015 5:41:17 PM
Subject: Check out all of the Diesel cars, trucks and SUVs on sale this year
MAIL_CONVERSATION_TOPIC: Check out all of the Diesel cars, trucks and SUVs on sale this year
Created: Fri 3/18/2016 6:18:31 PM

It may have happened quietly, but diesel has become more and more popular right here in the good ol' U.S. of A. Gone are the days of smelly, smoky, inefficient Oldsmobiles, and in their place are clean, modern, and unassuming oil burners, largely thanks to the prevalence of German automakers. But look closely, and you'll see that even some American companies are starting to play ball too. With stellar fuel economy, unbeatable driving range, and enough low end torque to make even the most mundane of commutes a bit more fun, we take a look at every diesel vehicle available to the general public, for passenger or commercial use. Audi Audi is one of the biggest proponents of the power of diesel, and it's clear in their model lineup. Almost every Audi sedan and SUV offer the fuel as an optional drivetrain, from the value-conscious (for a luxury brand) A3 to the stately A8. The Q5 and Q7 also offer diesel, giving them a leg up on other Japanese and American SUV competitors in the fuel economy range. A 2.0-liter turbodiesel 4-cylinder in the A3 will do up to 43-mpg on the highway, and even the 3.0-liter turbodiesel V-6 in the Q7 can manage 28-mpg by the EPA's standards. If anything, Audi is the prime example that you don't have to sacrifice luxury or style to get your hands on an efficient car. BMW It's no surprise that the Germans, hailing from the diesel-crazy continent of Europe, have the most to offer when it comes to alternative fuel cars. BMW is no different story, with 5 models in their wide lineup available with an oil-burning powertrain. The 3, 5, and 7 Series sedans are all available with diesel engines that make more torque than their gasoline counterparts but manage much better fuel economy. If utility is your thing, the sporty X3 compact crossover and the frugal-but-frivolous X5 xDrive35d are also available in diesel, keeping the headaches at the pump that usually accompany luxury SUVs to a minimum. Chevrolet/GMC Believe it or not, Chevy is the first American manufacturer to offer a diesel engine in a passenger car for the U.S. market in the modern age, possibly in an effort to erase their less-than-stellar reputation for making smelly, smoky brutes in the 1970s. The comfortable and quiet Cruze is available with a 2.0-liter turbocharged 4-cylinder diesel powertrain, reaching an EPA-estimated 46-mpg on the highway. If long hauls are your thing, then there are few better economy cars with better gas mileage than the Cruze Diesel. Naturally, diesel is also available for commercial use in the Chevy Express/GMC Savana cargo van, with a powerful and efficient 6.6-liter turbo-diesel V-8. Ford The Blue Oval is no stranger to diesel passenger cars in Europe and the rest of the world, but they've yet to grace American showrooms with the frugal econo-cars. However, if you're in need of a heavy duty pickup that's high on torque and low on gas station visits, Ford's got you covered with their Super Duty pickup series. With 440-horsepower and a supercar-smoking 860 lb.-ft. of torque, the 6.7-liter Power Stroke V-8 Turbo Diesel has best-in-class power and towing capacity, not to mention fuel economy. Jeep The Chrysler group's new Italian ownership has started to trickle its way into even the most American products, like the Jeep Grand Cherokee. You can now have Jeep's flagship SUV with a fuel-sipping EcoDiesel V-6 that gets up to 30-mpg on the highway and has a range of 730-miles on one tank. Couple that with a 7,400-pound towing capacity, and there may not be a better midsize SUV for the money. Mercedes-Benz Rounding out the trio of German luxury manufacturers, Mercedes offers many of its models with a diesel

option, including the stately E250 BlueTec with a 2.1-liter twin-turbo 4-cylinder that makes 195-horsepower and gets 42-mpg on the highway. For midsize luxury sedans, none are better at squeezing out mile after mile than the E250. If you're looking for an SUV, Mercedes has you covered too. The GLK-Class and M-Class are both offered with the same turbo-diesel as the E250, and the 7-passenger GL-Class comes with an available 3.0-liter turbo-diesel V-6. There's even an oil-burning Sprinter cargo van for the tradesman with a bit of badge affinity. Nissan Nissan's putting a lot of faith in the 2016 Titan pickup to snag a sweet slice of that massiv truck market pie, and they're relying on a diesel powertrain to do so. Available with a 5.0-liter Cummins turbo-diesel V-8 making 310-horsepower and a whopping 555 lb.-ft. of torque, the Titan may finally have the guts and the refinement, to match or beat Ford, Chevrolet, and Ram at their own game. Porsche Believe it or not, Germany's famous sports car manufacturer actually sells a diesel. Don't worry purists, it's not the 911, it's the Cayenne. Porsche's now-famous SUV is a capable all-rounder, with everything from a stout hybrid drivetrain to a honking turbocharged V-8, and for those who want to save gas without sacrificing weight for a battery system, there's the Cayenne diesel. With the 3.0-liter turbocharged diesel V-6 found in other VW Group applications, the Cayenne puts out 240-horsepower and a respectable 406 lb.-ft. of torque while returning 29-mpg on the highway. We'll take one in brown, please. Ram The same 3.0-liter EcoDiesel V-6 as the Grand Cherokee can be found under the hood of Ram's iconic pickup, and with such a stout combination of space and utility, there are few vehicles better for a great American road trip. With a towing capacity of 9,200-pounds, an average of 28-highway miles per gallon, and a driving range of 728 miles, the Ram 1500 EcoDiesel makes the case that diesel should be in the tank of every full-size pickup. Volkswagen Volkswagen's stronger-than-ever Golf lineup has been sweeping up awards in America and abroad for its quality, reliability, and efficiency, and that's largely to thank for the all-star TDI diesel powertrain. With the 2.0-liter turbodiesel that underpins the Golf, SportWagen, Jetta, Beetle, Passat, and Touareg, Volkswagen's TDI fleet gets anywhere from 600 to over 800 miles on one tank and 29 to 46 highway miles per gallon, depending on the model. When you can have a diesel in everything from a compact hatchback to a mid-size SUV, what's stopping you from hitting the V

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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Mon 7/27/2015 3:01:09 PM
Subject: MY2016 Volkswagen Group Decision Request

Hello Jim,

I have submitted test information and a decision request for the vehicle listed below. This configuration represents a new FEDV for the GVGAV04.0NUA testgroup.

Vehicle ID: GNUA-S8P

FEDV: Configuration: 0 (Audi S8 Plus, 4.0L TFSI , 8 Speed Semi-Automatic Transmission)

These tests represent a new fuel economy vehicle for this new S8 Plus model being introduced in the GVGAV04.0NUA Tier 2 Bin5 / LEVII ULEV Testgroup. There is no hardware changes in comparison to the MY2016 4.0L S8 engine; but, there have been software enhancements / improvements to increase the horsepower to 605 for the S8 Plus model. Manufacturer Confirmatory testing is required for the FTP and HWY cycles due to high FE for the ETW.

Please inform us of your decision as soon as possible.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 7/27/2015 8:46:00 PM
Subject: DAILY: Fiat Chrysler under tighter scrutiny after record NHTSA penalty | Pact gives power to NHTSA monitor | Mitsubishi will focus production on Japan, Russia, S.E. Asia

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Fiat Chrysler under tighter scrutiny after record NHTSA penalty

Fiat Chrysler Automobiles agreed to pay a $70 million fine, accept three years of close oversight by an independent monitor and buy back thousands of pickup trucks as part of a far-reaching consent agreement to settle a U.S. government probe into 23 safety recalls since 2009.

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Mitsubishi will focus production on Japan, Russia, S.E. Asia after closing U.S. plant

The National Highway Traffic Safety Administration's consent agreement with Fiat Chrysler Automobiles grants sweeping powers to an independent monitor tasked with overseeing the company's safety operations, deepening the federal government's role in direct oversight over individual automakers.

Mitsubishi will focus production on Japan, Russia and Southeast Asia after closing its U.S. plant, the automaker's president, Tetsuro Aikawa, said. Mitsubishi currently builds cars in Thailand and the Philippines and will open a factory in Indonesia.

Mitsubishi to end U.S. vehicle output, report says
Honda's freshened Accord gets new smartphone safety tech for 2016
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Why Lee Iacocca Sold Chrysler to Daimler-Benz

Lee Iacocca, who was fired as Chrysler's president last week, said he had no plans to retire. Early Monday, Chrysler Corp. said Iacocca, 66 years old, had resigned as chairman and chief executive officer, effective immediately. Chrysler said Iacocca's decision was voluntary. Bob Lutz, Chrysler's president of North American operations, was named to succeed Iacocca as chief executive officer. Chrysler said Iacocca will remain as chairman of the executive committee of the board of directors. Iacocca's departure follows a shakeup in Chrysler's top management that began in July when Chrysler Corp. in 1991. Bob Lutz

VW: No plans to cut China production

Mercedes-Benz Financial leads in dealer satisfaction, J.D. Power finds

NADA to hold convention in Las Vegas every other year

Fiat Chrysler recalls 1.7 million trucks for faulty airbags

U.S. automakers leery of Pacific trade deal as talks near end

GM fund approves 3 more serious-injury claims

GM Korea reaches tentative wage deal with union

Ford wins court appeal over apartheid claims

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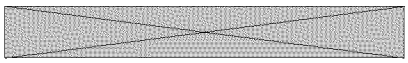

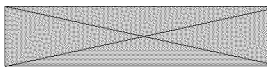

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From: Automotive News
Sent: Mon 7/27/2015 8:46:17 PM
Subject: DAILY: Fiat Chrysler under tighter scrutiny after record NHTSA penalty | Pact gives power to NHTSA monitor | Mitsubishi will focus production on Japan, Russia, S.E. Asia

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Learn to better target those mobile customers to generate more high quality sales and service leads.

Download the whitepaper.

Why Lee Iacocca Sacked Hal Sperlich and Harold Poling

Hugo Arnold, who was fired as Chrysler president last week, said he talked to Lee Iacocca, chairman of Chrysler Corp. in 1991. But the statement to Reuters that Iacocca did not plan to retire anytime soon. Iacocca has his own version of the story.

VW: No plans to cut China production

Mercedes-Benz Financial leads in dealer satisfaction, J.D. Power finds

NADA to hold convention in Las Vegas every other year

Fiat Chrysler recalls 1.7 million trucks for faulty airbags

U.S. automakers leery of Pacific trade deal as talks near end

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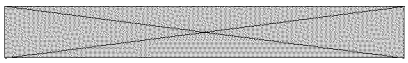

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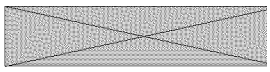

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Sent: Tue 7/28/2015 12:27:41 AM
Subject: Hacked Jeep Sends Warning to German Luxury-Car Trio
MAIL_CONVERSATION_TOPIC: Hacked Jeep Sends Warning to German Luxury-Car Trio
Created: Fri 3/18/2016 6:18:31 PM

(Bloomberg) -- When hackers landed a Fiat Chrysler Automobiles NV Jeep in a ditch last week, it sent a warning to BMW AG, Audi and Mercedes-Benz as the German luxury-car trio compete increasingly on technology rather than just horsepower.

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From: News
Sent: Tue 7/28/2015 12:27:44 AM
Subject: Hacked Jeep Sends Warning to German Luxury-Car Trio
MAIL_CONVERSATION_TOPIC: Hacked Jeep Sends Warning to German Luxury-Car Trio
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From: Automotive News
Sent: Tue 7/28/2015 12:49:51 PM
Subject: A.M. NEWSCAST: N.A. drives Ford Q2 profits | GM's $5B emerging-market plan | VW outsells Toyota in first half | Accavitti leaves Acura | Scion sticks with cars

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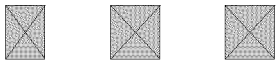

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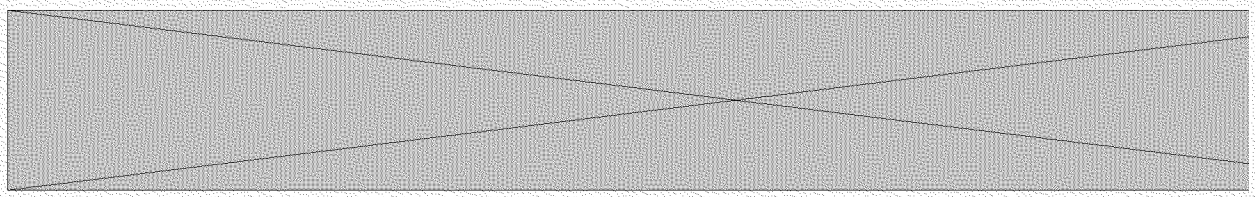
From: ITS America SmartBrief
Sent: Tue 7/28/2015 3:20:02 PM
Subject: Report: Vehicle telematics to increase twofold by 2020

Created for **bunker.byron@epa.gov** | Web Version



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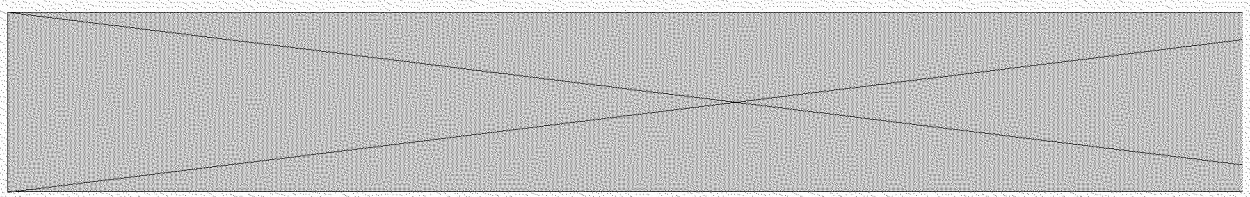

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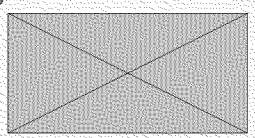
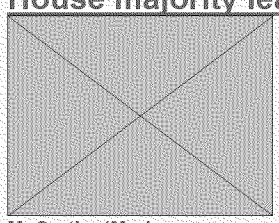


House majority leader: No vote on Senate highway bill



McCarthy (Mark Wilson/Getty Images)

House Majority Leader Kevin McCarthy, R-Calif., says the House will not vote on the Senate's six-year highway transportation bill. The House has already adopted a short-term bill that pays for transportation construction through mid-December. The stumbling block appears to be the provision to reauthorize the Export-Import Bank that's included in the Senate bill. House members will leave for their August recess on Thursday, and funding for Highway Trust Fund expires Friday. It's not clear what the Senate will do next in this "legislative game of chicken." The Hill (7/27), Bloomberg (7/27), The Hill (7/27), The Wall Street Journal (tiered subscription model) (7/27)

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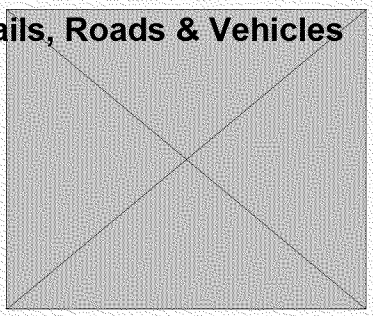

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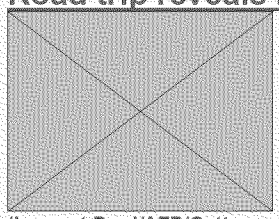
Road trip reveals nation's crumbling highway infrastructure



(Laurent Dard/AFP/Getty Images)

The "once gleaming interstate highway system is in crisis" in the U.S., writes Benjamin Preston, who drove from Brooklyn, N.Y., to Los Angeles and recounts the travel and road conditions in this article. "The U.S. currently has a $740 billion backlog in improvements needed to restore the nation's roads, highways and bridges to the level of condition and performance needed to meet the nation's transportation demands," said Rocky Moretti, director of policy and research for Trip. The Guardian (London) (7/27)

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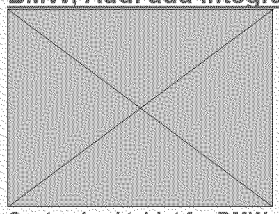
BMW, Audi add integrated tablets to luxury vehicles



Customized tablet for BMW (BMW)

Engineers at Audi and BMW are working on customized tablets to help the automakers better compete with iPads and Android tablets that passengers may opt to use in their vehicles. The customized tablets will run Google Android and connect to the car's Wi-Fi and electronics and will be designed to safely withstand crashes, as well as extreme temperatures. Automotive News (free content) (7/26)

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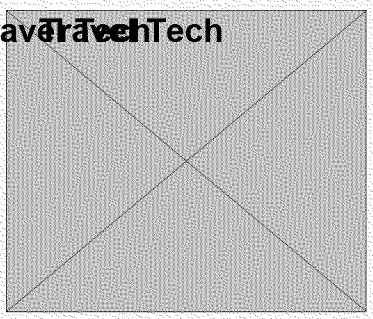
- **Government, industry, automakers continue push of ITS tech**
  RoadsBridges.com (7/27)
  Share:

TravelTech



Crunching the Numbers
Your passion may have led you into business, but tracking cash flow and other key numbers will help keep your company up and running. **Read *Boomtown: Think Like a Startup***

Report: Vehicle telematics to increase twofold by 2020

Stricter government standards for safety and navigation in off-highway vehicles will cause the global telematics market to double over the next five years, a Future Market Insights report says. "Overall awareness of off-highway vehicle telematics has considerably increased in recent years as the technology is now perceived as a convincing solution for improving total vehicular cost of ownership," FMI said. Construction Europe online (7/27)

Share:

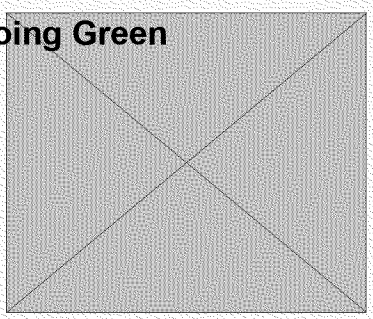
TomTom, Bosch team on maps for autonomous cars

TomTom has partnered with auto parts manufacturer Bosch to create high-detail maps for use in connected vehicles. The companies hope to have mapping of major roads in Germany completed by the end of this year, after which they plan to move on to the rest of Europe and then North America. The Verge (7/27)

Share:

- **Honda unveils smartphone app to combat pedestrian-car accidents**
  ITWorld.com/IDG News Service (7/27)
  Share:

Going Green



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Va. Peninsula sees more ride-sharing drivers than cabs

Following July 1 legislation that required ride-sharing drivers in Virginia to register with the state's DMV, statistics show that 402 vehicles in the Virginia Peninsula are registered as ride-sharing vehicles, compared to only 351 registered taxis. Daily Press (Newport News/Hampton, Va.) (free content) (7/26)

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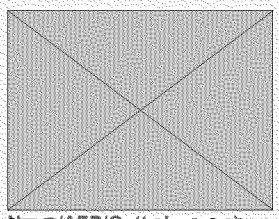
Policy

Inhofe pushes for adoption of DRIVE Act

Inhofe (Mandel



Ralph Waldo Emerson,
essayist, lecturer and poet

Share:

Sen. Ralph Inhofe (R-Okla.), chairman of the Senate Environment and Public Works Committee, used the Republican weekly address to the nation to promote the DRIVE Act, a six-year transportation package. He said short-term bills passed by Congress in recent years have forced states to focus on maintenance and not long-term projects. The DRIVE Act "provides the needed long-term funding certainty so that the major construction projects can get off the ground -- projects that aren't possible with short-term extensions," he said. Tulsa World (Okla.) (7/25)

Share:

Texas governor approves law for DOT spending oversight panel

Texas Gov. Greg Abbott has approved a bill that will create a committee to oversee financing and performance of the state's Department of Transportation to ensure sales tax revenue pledged to road projects is spent responsibly. "Our intention is not to provide TxDOT with a $5 billion blank check," said Rep. Ron Simmons, noting that the new law accounts for transparency and accountability. LandLineMag.com (7/27)

Share:

Register today for the 2015 ITS World Congress in Bordeaux, France

The 2015 ITS World Congress will be here before we know it! ITS America is working closely with ERTICO-ITS Europe to co-host the largest global transportation technology event of the year, to be held on October 5 to 9 in Bordeaux, France. The ITS World Congress brings together ITS stakeholders worldwide to exchange ideas, showcase the latest transportation innovations and create new business opportunities. Through the main theme, "Towards Intelligent Mobility – Better Use of Space," the Bordeaux Congress will focus not only on how achieving intelligent mobility will change our lives but also on the benefits space can bring to ITS applications. Download the Preliminary Program to start planning your experience and register today!

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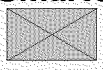
SmartQuote



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To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Tue 7/28/2015 4:07:38 PM
Subject: Green Car Report Daily Headlines

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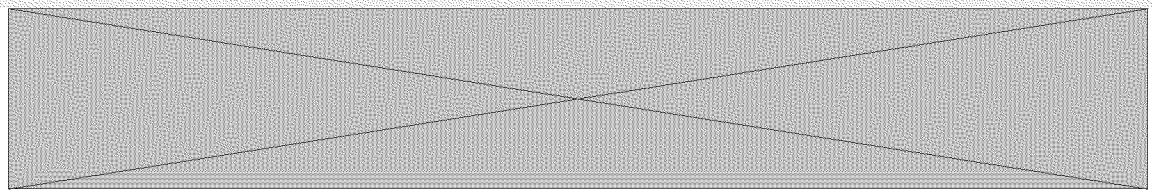

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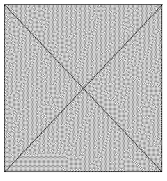
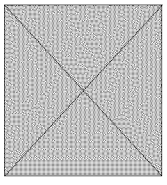
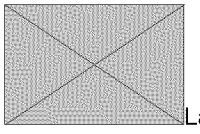




The latest from your friends at GCR:

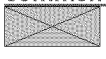
Why Do Fuel-Cell Vehicles Make Electric-Car Advocates So Crazy?

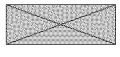
Jul 28, 2015 03:40 pm | feedback@highgearmedia.com (John Voelcker)



Last Thursday, Green Car Reports published a story noting that the several dozen drivers of Hyundai Tucson Fuel Cell vehicles had expressed deep frustration with the unreliability of Southern California's current hydrogen fueling stations. That story hit a chord; as of this morning, it's accumulated more comments than any other article we've...

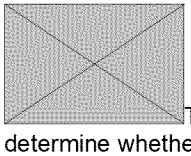
comments | read more





Tesla Supercharger Side Effects, VW Plug-In Cars, FCA Likes Fuel Cells: Today's Car News

Jul 28, 2015 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)



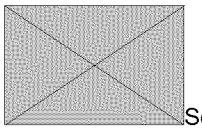
Today, one Tesla Model S owner tries to determine whether using Supercharger DC fast-charging stations can impact battery capacity, a report of possible

new plug-in hybrid and all-electric models from Volkswagen, and the chief technology officer of Fiat Chrysler Automobiles says fuel cells are the future. All this and more on Green Car Reports...

comments | read more

Fiat Chrysler CTO: Fuel Cells Are The Future, Batteries Are Not

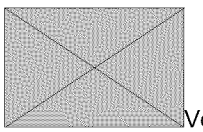
Jul 28, 2015 01:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Several companies have expressed enthusiasm about battery-electric cars, but Fiat Chrysler Automobiles (FCA) isn't one of them. Six years after killing its pre-bankruptcy ENVI project that showed a variety of plug-in concept cars, FCA still doesn't offer any mainstream plug-in models. Its only production electric car is the Fiat 500e, and FCA CEO...

comments | read more

Volkswagen's Lineup Of Electric, Plug-In Hybrid Models To Expand

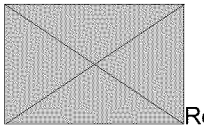
Jul 28, 2015 12:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Volkswagen will soon expand its lineup of electric cars and plug-in hybrids, according to reports in German media, with new entries on both the high and low ends of its range. But the rumored new models likely won't be sold in the U.S. They will, however, help VW meet tighter European emissions standards, as well as electric-car adoption...

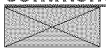
comments | read more

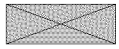
Lack Of Innovation Could Doom Battle To Trim Carbon Emissions

Jul 28, 2015 11:30 am | feedback@highgearmedia.com (Stephen Edelstein)

 Representatives of world governments will meet in Paris this December to discuss a global strategy for combating climate change. But the outlook doesn't appear promising, according to a recent assessment by the International Energy Agency. It claims "not one" of the new technologies being tracked as possible solutions to the problem is meeting its...

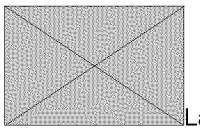
comments | read more



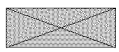


Life With Tesla Model S: Does Supercharging Cut Battery Capacity?

Jul 28, 2015 11:00 am | feedback@highgearmedia.com (David Noland)

 Last month, my wife and I took my 2013 Tesla Model S on a day trip from our home in New York's Hudson Valley to Brattleboro, Vermont, a distance of 180 miles. We picked up our daughter, charged the 85-kilowatt-hour battery up to 98 percent at the Brattleboro Supercharger, and returned home via a longer, more scenic route of 210 miles. To my...

comments | read more



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Update your profile

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 7/28/2015 7:37:56 PM
Subject: VW overtakes Toyota to become world's largest automaker
MAIL_CONVERSATION_TOPIC: VW overtakes Toyota to become world's largest automaker
Created: Fri 6/17/2016 4:29:42 PM

Volkswagen was the world's largest automaker during the first half of this year, pumping out 5.04 million vehicles.

View article...

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Tue 7/28/2015 7:55:00 PM
Subject: Volkswagen SIL

Hello Jim:

I communicated your position regarding the Volkswagen 1.4L manual shift speeds w/SIL to my colleagues at Volkswagen AG. They would still like to speak with you. I tried to set up a brief call last Friday on short notice, but you may have been out of the office. Would you have about 30 minutes tomorrow morning, or at some other time convenient for you? The discussion topics are as follows:

1. Official EPA letter stating approval/denial
2. Reasoning for denial
3. Further possibilities

Please let me know if this is possible and I will set up a call-in number.

Thanks,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 7/28/2015 8:02:40 PM
Subject: VW overtakes Toyota to become world's largest automaker
MAIL_CONVERSATION_TOPIC: VW overtakes Toyota to become world's largest automaker
Created: Fri 3/18/2016 6:18:31 PM

Volkswagen was the world's largest automaker during the first half of this year, pumping out 5.04 million vehicles.

View article...

From: Kata, Leonard (EEO)
Location: Telephone Conference
Importance: Normal
Subject: Jetta 1.4L SIL (GSI)
Start Date/Time: Wed 7/29/2015 1:00:00 PM
End Date/Time: Wed 7/29/2015 1:30:00 PM

.....
,,,,,,,
To all:
A telephone conference has been set up to further discuss the Jetta 1.4L SIL topic.
Discussion points are:
1. Official EPA letter stating approval/denial
2. Reasoning for denial
3. Further possibilities
Call-in details are provided below.
Best regards,
Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.
Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

.....

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

Non-Responsive

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.....

From: Snyder, Jim
Location: Telephone Conference
Importance: Normal
Subject: Accepted: Jetta 1.4L SIL (GSI)
Start Date/Time: Wed 7/29/2015 1:00:00 PM
End Date/Time: Wed 7/29/2015 1:30:00 PM

From: News
Sent: Tue 7/28/2015 10:33:06 PM
Subject: VW overtakes Toyota to become world's largest automaker
MAIL_CONVERSATION_TOPIC: VW overtakes Toyota to become world's largest automaker
Created: Fri 3/18/2016 6:18:44 PM

Volkswagen was the world's largest automaker during the first half of this year, pumping out 5.04 million vehicles.

View article...

To: Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 7/29/2015 11:14:45 AM
Subject: New 5-cycle Calculator

Hello Bob,

We have had time to work with your new 5-cycle calculator and it seems to be in good order at least we found no discrepancies. We have a couple of suggestions with regard to the logging of data. Would it be possible to have a field included along with the test numbers to identify the vehicle (vehicle ID) and maybe the configuration number which would then be transferred to the data log? And, a long text field next to the vehicle ID to place manufacturer notes. The sheet is locked so that prevents us from wrapping text along several cells.

I think it would also be helpful to also log the calculated combined fuel economy values.

Our factory colleagues also liked the format from the original EPA 5-cycle calculator that showed all the values and approach (i.e.: D5C, V5C Std 3-Bag, M5C Std 3-Bag) calculated values on one screen before the values are logged on the second tab. That may be a bit more difficult to do at this point but I said I would ask.

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

From: News
Sent: Wed 7/29/2015 1:05:02 PM
Subject: VW overtakes Toyota to become world's largest automaker
MAIL_CONVERSATION_TOPIC: VW overtakes Toyota to become world's largest automaker
Created: Fri 6/17/2016 4:29:42 PM

Volkswagen was the world's largest automaker during the first half of this year, pumping out 5.04 million vehicles.

View article...

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Good, David[good.david@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]; Verify Help Desk[verifyhelp@csc.com]
From: Ex. 6
Sent: Wed 7/29/2015 1:14:37 PM
Subject: RE: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hello Mr. Thomas,

Thank you for the confirmation.

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

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"Thomas, Richard (EEO)" <Richard.Thomas@vw.com>

07/29/2015 07:52 AM

To Verify Help Desk@CSC

cc "'Good.David@epamail.epa.gov'" <Good.David@epamail.epa.gov>, "Kata, Leonard (EEO)" <Leonard.Kata@vw.com>

Subject RE: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hi Ex. 6;

I submitted this VGA index #073 again as new this morning with a release date of July 30th. It was accepted.

Thank you and best regards,
Richard

Richard E. Thomas
Senior Emission Certification Specialist
Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213
Fax: 248 754 4207
mailto: Richard.Thomas@VW.com

From: Ex. 6 **On Behalf Of** Verify Help Desk
Sent: Tuesday, July 28, 2015 7:06 PM
To: Thomas, Richard (EEO)
Cc: 'Good.David@epamail.epa.gov'; Kata, Leonard (EEO)
Subject: RE: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hello Mr. Thomas,

We have consulted with our EPA manager and would like you to submit this Model Type Index again as 'New'. Please let us know if you have any further question or issues. Ex. 6

Ex. 6

Verify Help Desk
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"Thomas, Richard (EEO)" <Richard.Thomas@vw.com>

07/28/2015 02:39 PM

To Verify Help Desk@CSC

cc "'Good.David@epamail.epa.gov'" <Good.David@epamail.epa.gov>, "Kata, Leonard (EEO)" <Leonard.Kata@vw.com>

Subject RE: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Great, thank you Ex. 6

From: Ex. 6 **On Behalf Of** Verify Help Desk
Sent: Tuesday, July 28, 2015 2:37 PM
To: Thomas, Richard (EEO)
Cc: 'Good.David@epamail.epa.gov'; Kata, Leonard (EEO)
Subject: Re: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hello Mr. Thomas,

Verify help desk ticket HLP-6478 was opened for your inquiry. We will request EPA authorization to include this update in our next database updates release this Thursday, July 30.

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

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To verifyhelp@csc.com

cc

Subject Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073

Ex. 6 USA/CSC

07/28/2015 02:31 PM

---- Forwarded by Vincent E Coleman/USA/CSC on 07/28/2015 02:30 PM -----

From: "Thomas, Richard (EEO)" <Richard.Thomas@vw.com>
To: Ex. 6 /USA/CSC@CSC

Cc: "'Good.David@epamail.epa.gov'" <Good.David@epamail.epa.gov>, "Kata, Leonard (EEO)" <Leonard.Kata@vw.com>
Date: 07/28/2015 02:11 PM
Subject: Reactivation of 2016 Volkswagen Label Index #073

Hello Ex. 6

I'm sorry to have to do this but one of the labels indexes we asked to make inactive will have to become active again. I talked to Dave Good who told me to contact the help desk to make that happen. It was VGA label index # 073 for the Jetta 1.8L manual 5-speed transmission. There was some miscommunication between our certification group and the marketing types in our corporate headquarters in Herndon Virginia.

Please make VGA index #073 active again, it can be immediately released for the guide. If you need me to do anything in the Verify labeling program please let me know.

Best regards,
Richard

Richard E. Thomas
Senior Emission Certification Specialist
Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Phone: 248 754 4213
Fax: 248 754 4207
mailto: Richard.Thomas@VW.com

To: Ex. 7
From: Good, David
Sent: Wed 7/29/2015 3:05:48 PM
Subject: RE: Ex. 7 - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478) - 2016 FE Label data attached
VW_Group_2016 FE Guide-all rel dates-no-sales-7-28-2015.xlsx

Ex. 7

Here is the 2016 FE Label data as of 6AM this morning (7/28). As expected, the macro flagged some errors for Index 85. Please ignore the e-Golf errors.

Dave

From: Ex. 7
Sent: Wednesday, July 29, 2015 7:52 AM
To: Verify Help Desk
Cc: Good, David; Ex. 7
Subject: RE: Ex. 7 - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hi Ex. 7;

I submitted this VGA index #073 again as new this morning with a release date of July 30th. It was accepted.

Thank you and best regards,

Ex. 7

Volkswagen Group of America, Inc.

Ex. 7

From: Ex. 4 - CBI **On Behalf Of** Verify Help Desk
Sent: Tuesday, July 28, 2015 7:06 PM
To: Ex. 7
Cc: 'Good.David@epamail.epa.gov'; Ex. 7
Subject: RE: Ex. 7 - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hello Mr. Ex. 7

We have consulted with our EPA manager and would like you to submit this Model Type Index again as 'New'. Please let us know if you have any further question or issues.

Ex. 4 - CBI

Verify Help Desk
Ex. 4 - CBI
Contractor to the Environmental Protection Agency

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Ex. 7

07/28/2015 02:39 PM

To Verify Help Desk@Ex. 4 - CBI
cc'"Good.David@epamail.epa.gov'" <Good.David@epamail.epa.gov>; Ex. 7
Ex. 7
Subject RE: Ex. 7 Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Great, thank you Ex. 4 - CBI.

From: Ex. 4 - CBI **On Behalf Of** Verify Help Desk
Sent: Tuesday, July 28, 2015 2:37 PM
To: Ex. 7
Cc: 'Good.David@epamail.epa.gov'; Ex. 7
Subject: Re: Ex. 7 - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hello Mr. Ex. 7

Verify help desk ticket HLP-6478 was opened for your inquiry. We will request EPA authorization to include this update in our next database updates release this Thursday, July 30.

Ex. 4 - CBI

Verify Help Desk
Ex. 4 - CBI
Contractor to the Environmental Protection Agency

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Ex. 4 - CBI

07/28/2015 02:31 PM

To verifyhelp@Ex. 4 - CBI
cc
Subject Ex. 7 - Fw: Reactivation of 2016 Volkswagen Label Index #073

---- Forwarded by Ex. 4 - CBI on 07/28/2015 02:30 PM ------

From: Ex. 7 @vw.com>
To: Ex. 4 - CBI
Cc: "'Good.David@epamail.epa.gov'" <Good.David@epamail.epa.gov>, Ex. 7 @vw.com>
Date: 07/28/2015 02:11 PM
Subject: Reactivation of 2016 Volkswagen Label Index #073

Hello Ex. 4 - CBI,

I'm sorry to have to do this but one of the labels indexes we asked to make inactive will have to become active again. I talked to Dave Good who told me to contact the help desk to make that happen. It was VGA label index # 073 for the Jetta 1.8L manual 5-speed transmission. There was some miscommunication between our certification group and the marketing types in our corporate headquarters in Herndon Virginia.

Please make VGA index #073 active again, it can be immediately released for the guide. If you need me to do anything in the Verify labeling program please let me know.

Best regards,

Ex. 7

Volkswagen Group of America, Inc.

Ex. 7

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
		2016 Volkswage	Audi	A3	VGA	36	1.8	4
		2016 Volkswage	Audi	A3 Cabriol	VGA	37	1.8	4
		2016 Volkswage	Audi	A3 Cabriol	VGA	39	2.0	4
		2016 Volkswage	Audi	A3 quattro	VGA	38	2.0	4
		2016 Volkswage	Audi	A4	VGA	51	2.0	4
		2016 Volkswage	Audi	A4 quattro	VGA	33	2.0	4
		2016 Volkswage	Audi	A4 quattro	VGA	49	2.0	4
		2016 Volkswage	Audi	A5 Cabriol	VGA	35	2.0	4
		2016 Volkswage	Audi	A5 quattro	VGA	34	2.0	4
		2016 Volkswage	Audi	A5 quattro	VGA	50	2.0	4
		2016 Volkswage	Audi	A6	VGA	16	2.0	4
		2016 Volkswage	Audi	A6 quattro	VGA	15	2.0	4
		2016 Volkswage	Audi	A6 quattro	VGA	2	3.0	6
Diesel;		2016 Volkswage	Audi	A6 quattro	VGA	3	3.0	6
		2016 Volkswage	Audi	A7 quattro	VGA	1	3.0	6
Diesel;		2016 Volkswage	Audi	A7 quattro	VGA	4	3.0	6
Diesel;		2016 Volkswage	Audi	A8L	VGA	26	3.0	6
		2016 Volkswage	Audi	A8L	VGA	25	3.0	6
		2016 Volkswage	Audi	A8L	VGA	9	4.0	8
		2016 Volkswage	Audi	A8L	VGA	66	6.3	12
		2016 Volkswage	Audi	allroad qu	VGA	32	2.0	4
		2016 Volkswage	Audi	Q3	VGA	53	2.0	4
		2016 Volkswage	Audi	Q3 quattro	VGA	54	2.0	4
		2016 Volkswage	Audi	Q5	VGA	31	2.0	4
Diesel;		2016 Volkswage	Audi	Q5	VGA	27	3.0	6
		2016 Volkswage	Audi	Q5	VGA	47	3.0	6
Hybrid;		2016 Volkswage	Audi	Q5 Hybrid	VGA	62	2.0	4
		2016 Volkswage	Audi	RS7	VGA	12	4.0	8
		2016 Volkswage	Audi	S3	VGA	55	2.0	4
		2016 Volkswage	Audi	S4	VGA	42	3.0	6
		2016 Volkswage	Audi	S4	VGA	45	3.0	6
		2016 Volkswage	Audi	S5	VGA	43	3.0	6
		2016 Volkswage	Audi	S5	VGA	46	3.0	6
		2016 Volkswage	Audi	S5 Cabriole	VGA	44	3.0	6
		2016 Volkswage	Audi	S6	VGA	14	4.0	8
		2016 Volkswage	Audi	S7	VGA	13	4.0	8
		2016 Volkswage	Audi	S8	VGA	11	4.0	8
		2016 Volkswage	Audi	SQ5	VGA	48	3.0	6
		2016 Volkswage	Audi	TT Coupe c	VGA	60	2.0	4
		2016 Volkswage	Audi	TT Roadste	VGA	61	2.0	4
		2016 Volkswage	Audi	TTS Coupe	VGA	52	2.0	4
		2016 Volkswage	Bentley	Continenta	VGA	6	4.0	8
		2016 Volkswage	Bentley	Continenta	VGA	28	6.0	12
		2016 Volkswage	Bentley	Continenta	VGA	7	4.0	8

	2016	Volkswage	Bentley	Continenta	VGA	30	6.0	12
	2016	Volkswage	Bentley	Flying Spur	VGA	8	4.0	8
	2016	Volkswage	Bentley	Flying Spur	VGA	29	6.0	12
	2016	Volkswage	Bentley	Mulsanne	VGA	5	6.8	8
	2016	Volkswage	Lamborghi	Aventador	VGA	17	6.5	12
	2016	Volkswage	Lamborghi	Aventador	VGA	18	6.5	12
	2016	Volkswage	Lamborghi	Huracan	VGA	87	5.2	10
	2016	Volkswage	Lamborghi	Huracan Sp	VGA	88	5.2	10
	2016	Volkswage	Volkswage	Beetle	VGA	71	1.8	4
	2016	Volkswage	Volkswage	Beetle	VGA	74	1.8	4
	2016	Volkswage	Volkswage	Beetle	VGA	79	2.0	4
	2016	Volkswage	Volkswage	Beetle Con	VGA	72	1.8	4
	2016	Volkswage	Volkswage	Beetle Con	VGA	77	2.0	4
	2016	Volkswage	Volkswage	Beetle Con	VGA	80	2.0	4
	2016	Volkswage	Volkswage	CC	VGA	63	2.0	4
	2016	Volkswage	Volkswage	CC	VGA	64	2.0	4
	2016	Volkswage	Volkswage	CC 4Motio	VGA	68	3.6	6
BEV; Error	Y	2016	Volkswage	Volkswage	e-Golf	VGA	86	0.0
BEV; Error	Y	2016	Volkswage	Volkswage	e-Golf	VGA	86	0.0
	2016	Volkswage	Volkswage	Eos	VGA	65	2.0	4
	2016	Volkswage	Volkswage	Golf	VGA	58	1.8	4
	2016	Volkswage	Volkswage	Golf	VGA	59	1.8	4
	2016	Volkswage	Volkswage	Golf R	VGA	22	2.0	4
	2016	Volkswage	Volkswage	Golf R	VGA	23	2.0	4
	2016	Volkswage	Volkswage	Golf Sport\	VGA	56	1.8	4
	2016	Volkswage	Volkswage	Golf Sport\	VGA	57	1.8	4
	2016	Volkswage	Volkswage	GTI	VGA	40	2.0	4
	2016	Volkswage	Volkswage	GTI	VGA	41	2.0	4
Error in co	Y	2016	Volkswage	Volkswage	Jetta	VGA	85	1.4
	2016	Volkswage	Volkswage	Jetta	VGA	70	1.8	4
	2016	Volkswage	Volkswage	Jetta	VGA	76	2.0	4
	2016	Volkswage	Volkswage	Jetta	VGA	78	2.0	4
Hybrid;	2016	Volkswage	Volkswage	Jetta Hybri	VGA	83	1.4	4
	2016	Volkswage	Volkswage	Passat	VGA	81	1.8	4
	2016	Volkswage	Volkswage	Passat	VGA	67	3.6	6
	2016	Volkswage	Volkswage	Tiguan	VGA	21	2.0	4
	2016	Volkswage	Volkswage	Tiguan 4M	VGA	20	2.0	4
Diesel;	2016	Volkswage	Volkswage	Touareg	VGA	19	3.0	6
	2016	Volkswage	Volkswage	Touareg	VGA	69	3.6	6

Transmiss	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	23	33	27				28.9	46.6	34.858
Auto(AM-S	24	35	28				30.5	47	36.2224
Auto(AM-S	23	32	26				29	44.2	34.3094
Auto(AM-S	24	33	27				30	44.6	35.1828
Auto(AV-S	24	31	27				30.3	44.6	35.4089
Auto(S8)	21	30	25				27.1	42.2	32.3011
Manual(M	22	32	26				27.6526	43.9914	33.2017
Auto(S8)	21	29	24				26.4	41	31.4377
Auto(S8)	21	30	25				27.1	42.2	32.3011
Manual(M	22	32	26				27.6526	43.9914	33.2017
Auto(AM-S	24	35	28				31.2269	48.8	37.2657
Auto(S8)	22	32	26				27.8348	45.5	33.7274
Auto(S8)	20	30	24				25.6	41.9	31.0325
Auto(S8)	25	38	30				31.1687	52.7	38.1901
Auto(S8)	20	30	24				25.6	41.9	31.0325
Auto(S8)	25	38	30				31.1687	52.7	38.1901
Auto(S8)	24	36	28				29.9399	51.4	36.8664
Auto(S8)	19	29	22				23.5657	39.6	28.8162
Auto(S8)	18	29	22				22.278	39.1	27.6266
Auto(S8)	14	22	17				17.2	28.6	20.9595
Auto(S8)	21	28	24				26.7	39.2	31.1732
Auto(S6)	20	29	23				24.8499	40	29.9555
Auto(S6)	20	28	23				24.8	38.5	29.5284
Auto(S8)	20	28	23				24.8	38.6	29.5548
Auto(S8)	24	31	27				29.1832	44.1	34.4228
Auto(S8)	18	26	21				22.8446	35.5	27.2096
Auto(S8)	24	30	26				30.4	39.9	34.048
Auto(S8)	15	25	18				17.8763	33.1799	22.5584
Auto(AM-S	23	31	26				28.5	41.5	33.1767
Auto(AM-S	18	28	21				22.4	35.8	26.9372
Manual(M	17	26	20				20	33.4	24.4063
Auto(AM-S	18	28	21				22.4	35.8	26.9372
Manual(M	17	26	20				20	33.4	24.4063
Auto(AM-S	18	26	21				22.1	34.7	26.4165
Auto(AM-S	18	27	21				21.9777	36.8	26.843
Auto(AM-S	17	27	21				21.7499	37.3	26.7724
Auto(S8)	17	27	20				19.9	36.4	24.9995
Auto(S8)	17	24	19				20.8	32.9	24.9252
Auto(AM-S	23	30	26				28.8051	41.9128	33.5228
Auto(AM-S	23	30	26				28.8051	41.9128	33.5228
Auto(AM-S	23	27	25				28.2	38	31.9024
Auto(S8)	15	25	19				19.1	33.5	23.6806
Auto(S8)	12	21	15				15.4	28.3	19.3741
Auto(S8)	14	24	17				17.3	31.8	21.7662

Auto(S8)	12	20	15	14.4	26.7	18.1658
Auto(S8)	14	24	17	17.3	31.8	21.7662
Auto(S8)	12	20	15	14.4	26.7	18.1658
Auto(S8)	11	18	13	13.6993	24.8	17.1546
Auto(AM-S	11	18	13	12.6	25.2	16.2581
Auto(AM-S	10	17	12	11.7313	21.9881	14.8481
Auto(AM-S	14	21	17	17.3	27	20.6362
Auto(AM-S	14	20	16	17	26.4	20.2436
Auto(S6)	25	34	28	31.4714	47.6267	37.1407
Manual(M	25	34	28	31.76	47.8	37.4089
Manual(M	23	31	26	28.5453	43.3257	33.7222
Auto(S6)	25	34	28	31.4714	47.6267	37.1407
Auto(AM-S	23	31	26	29.1428	43.2697	34.1618
Manual(M	23	31	26	28.5453	43.3257	33.7222
Auto(AM-S	22	31	25	26.9721	42.4615	32.2692
Manual(M	21	32	25	25.7082	43.8369	31.5863
Auto(S6)	17	25	20	20.5	33.5	24.8373
Auto(A1)	128	109	116	175.3	136.4	165.93
Auto(A1)	27	32	29	18.7987	22.4118	20.4246
Auto(AM-S	22	30	25	27.5	41.5	32.4219
Auto(S6)	25	36	29	32.5	51.1	38.8661
Manual(M	25	37	30	32.6	52.5	39.3042
Auto(AM-S	23	30	26	28.3	40.9	32.8547
Manual(M	22	31	25	26.5	39.7	31.1626
Auto(S6)	25	35	29	32.7	49.4	38.567
Manual(M	25	36	29	31.7	50.5	38.0792
Auto(AM-S	25	33	28	30.7	45.3	35.9078
Manual(M	25	34	28	30	46.4	35.674
Auto(S6)	28	39	32	36.7	58.1	43.7598
Auto(S6)	25	36	29	32.6424	51.503	39.083
Auto(AM-S	24	33	27	30.639	47.1	36.3569
Manual(M	23	33	27	28.8819	46.678	34.8632
Auto(AM-S	42	48	44	57.5	65.3	60.7663
Auto(S6)	25	38	29	32.1277	53.336	39.1294
Auto(AM-S	20	28	23	23.9	37.3	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7782	36.0407	29.5668
Auto(S8)	21	29	24	25.3	41	30.5673
Auto(S8)	17	23	19	21.3	31.6	24.9612

a should have CVT for transmission type.Warning - number of battery packs exceed 4;please list battery packs, not

a should have CVT for transmission type.Warning - number of battery packs exceed 4;please list battery packs, not

fuel value (we calculate 41.); Error in Rounded Adjusted City CO2, we calculate 318; Error in Rounded Adjusted Hig

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
23.4556	33.3421	27.0673		TC	Turbochar	AMS	Automated Manual-	Selectable	6
24.3444	34.5845	28.0867		TC	Turbochar	AMS	Automated Manual-	Selectable	6
23.312	31.5429	26.4136		TC	Turbochar	AMS	Automated Manual-	Selectable	6
24.0818	32.6198	27.297		TC	Turbochar	AMS	Automated Manual-	Selectable	6
23.7847	30.8933	26.532		TC	Turbochar	SCV	Selectable Continuously Variable		8
21.3584	30.0427	24.5522		TC	Turbochar	SA	Semi-Automatic		8
22.2613	32.093	25.8209		TC	Turbochar	M	Manual		6
20.8442	29.2228	23.9319		TC	Turbochar	SA	Semi-Automatic		8
21.3584	30.0427	24.5522		TC	Turbochar	SA	Semi-Automatic		8
22.2613	32.093	25.8209		TC	Turbochar	M	Manual		6
24.3335	34.5182	28.059		TC	Turbochar	AMS	Automated Manual-	Selectable	7
21.8708	32.2876	25.5853		TC	Turbochar	SA	Semi-Automatic		8
20.2543	29.8379	23.6763		SC	Supercha	SA	Semi-Automatic		8
25.2158	37.5811	29.5982		TC	Turbochar	SA	Semi-Automatic		8
20.2543	29.8379	23.6763		SC	Supercha	SA	Semi-Automatic		8
25.2158	37.5811	29.5982		TC	Turbochar	SA	Semi-Automatic		8
23.8727	36.3252	28.2271		TC	Turbochar	SA	Semi-Automatic		8
18.6853	29.3211	22.3303		SC	Supercha	SA	Semi-Automatic		8
17.9485	28.5015	21.5369		TC	Turbochar	SA	Semi-Automatic		8
13.8358	21.9706	16.602	G	NA	Naturally A	SA	Semi-Automatic		8
21.0646	27.9892	23.7037		TC	Turbochar	SA	Semi-Automatic		8
19.6619	28.538	22.8617		TC	Turbochar	SA	Semi-Automatic		6
19.7028	28.0105	22.7375		TC	Turbochar	SA	Semi-Automatic		6
19.6619	27.5771	22.5781		TC	Turbochar	SA	Semi-Automatic		8
23.6286	31.3636	26.5783		TC	Turbochar	SA	Semi-Automatic		8
17.8443	25.5746	20.6536		SC	Supercha	SA	Semi-Automatic		8
24.0075	29.7936	26.3065		TC	Turbochar	SA	Semi-Automatic		8
14.521	25.1577	17.9329		TC	Turbochar	SA	Semi-Automatic		8
23.1833	30.7065	26.056		TC	Turbochar	AMS	Automated Manual-	Selectable	6
18.117	27.558	21.419		SC	Supercha	AMS	Automated Manual-	Selectable	7
17.0438	26.023	20.1767		SC	Supercha	M	Manual		6
18.117	27.558	21.419		SC	Supercha	AMS	Automated Manual-	Selectable	7
17.0438	26.023	20.1767		SC	Supercha	M	Manual		6
17.6699	25.953	20.6333		SC	Supercha	AMS	Automated Manual-	Selectable	7
17.7328	26.6352	20.8721		TC	Turbochar	AMS	Automated Manual-	Selectable	7
17.4937	26.7312	20.715		TC	Turbochar	AMS	Automated Manual-	Selectable	7
16.5369	26.7008	19.9551		TC	Turbochar	SA	Semi-Automatic		8
16.7285	23.6581	19.2682		SC	Supercha	SA	Semi-Automatic		8
23.3039	30.3915	26.0363		TC	Turbochar	AMS	Automated Manual-	Selectable	6
23.3039	30.3915	26.0363		TC	Turbochar	AMS	Automated Manual-	Selectable	6
22.8034	27.3644	24.6524		TC	Turbochar	AMS	Automated Manual-	Selectable	6
15.2087	25.3816	18.5553		TC	Turbochar	SA	Semi-Automatic		8
12.4737	21.0866	15.2827	G	TC	Turbochar	SA	Semi-Automatic		8
13.819	23.8488	17.0447	G	TC	Turbochar	SA	Semi-Automatic		8

12.0228	20.0478	14.6643	G	TC	Turbochar¡SA	Semi-Automatic	8
13.819	23.8488	17.0447	G	TC	Turbochar¡SA	Semi-Automatic	8
12.0228	20.0478	14.6643	G	TC	Turbochar¡SA	Semi-Automatic	8
11.1823	17.9616	13.4701	G	TC	Turbochar¡SA	Semi-Automatic	8
10.6055	18.4729	13.1199	G	NA	Naturally ⁄AMS	Automated Manual- Selectable	7
9.9676	16.7	12.1766	G	NA	Naturally ⁄AMS	Automated Manual- Selectable	7
14.318	20.6311	16.6044	G	NA	Naturally ⁄AMS	Automated Manual- Selectable	7
13.9274	19.9987	16.1311	G	NA	Naturally ⁄AMS	Automated Manual- Selectable	7
24.5488	33.7087	27.9689		TC	Turbochar¡SA	Semi-Automatic	6
24.7637	33.8438	28.164		TC	Turbochar¡M	Manual	5
23.0368	30.5347	25.8985		TC	Turbochar¡M	Manual	6
24.5488	33.7087	27.9689		TC	Turbochar¡SA	Semi-Automatic	6
22.8175	30.7926	25.8277		TC	Turbochar¡AMS	Automated Manual- Selectable	6
23.0368	30.5347	25.8985		TC	Turbochar¡M	Manual	6
21.8736	31.0153	25.2185		TC	Turbochar¡AMS	Automated Manual- Selectable	6
20.7831	31.7504	24.6082		TC	Turbochar¡M	Manual	6
16.9415	25.219	19.8774		NA	Naturally ⁄SA	Semi-Automatic	6
125.9	165.3	115.521			A	Automatic	1
26.8544	32.0146	29.1765			A	Automatic	1
21.7634	30.1121	24.8658		TC	Turbochar¡AMS	Automated Manual- Selectable	6
25.264	36.0643	29.1989		TC	Turbochar¡SA	Semi-Automatic	6
25.3353	37.0021	29.5244		TC	Turbochar¡M	Manual	5
23.0603	30.0715	25.7633		TC	Turbochar¡AMS	Automated Manual- Selectable	6
21.6528	30.5249	24.911		TC	Turbochar¡M	Manual	6
25.4066	34.9222	28.9572		TC	Turbochar¡SA	Semi-Automatic	6
24.6921	35.6616	28.6591		TC	Turbochar¡M	Manual	5
24.6434	32.6158	27.6891		TC	Turbochar¡AMS	Automated Manual- Selectable	6
24.9095	34.2917	28.407		TC	Turbochar¡M	Manual	6
27.8072	39.2595	32.009		TC	Turbochar¡SA	Semi-Automatic	6
25.3353	36.3325	29.3303		TC	Turbochar¡SA	Semi-Automatic	6
23.902	33.3709	27.4007		TC	Turbochar¡AMS	Automated Manual- Selectable	6
23.1336	32.7327	26.6506		TC	Turbochar¡M	Manual	6
41.5773	48.2766	44.3466		TC	Turbochar¡AMS	Automated Manual- Selectable	7
24.9783	37.5368	29.4054		TC	Turbochar¡SA	Semi-Automatic	6
19.7174	27.8048	22.6868		NA	Naturally ⁄AMS	Automated Manual- Selectable	6
20.5496	25.7855	22.6161		TC	Turbochar¡SA	Semi-Automatic	6
20.3859	25.8136	22.5164		TC	Turbochar¡SA	Semi-Automatic	6
20.799	28.6879	23.7363		TC	Turbochar¡SA	Semi-Automatic	8
17.0411	22.7325	19.2048		NA	Naturally ⁄SA	Semi-Automatic	8

cells; Please revise Verify as needed.

cells; Please revise Verify as needed.

hway CO2, we calculate 220; Error in Rounded Adjusted combined CO2, we calculate 274; Please revise Verify as ne

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated Ma	nual with	paddles)	2-Wheel D	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			G	Gasoline (F
MT with pad	dles)	F	2-Wheel D	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		422	GP	Gasoline (F
N	N	A	All Wheel	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		406	GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		422	GP	Gasoline (F
N	N	A	All Wheel	GVGAV02.	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV03.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ03.0	NU4		5	DU	Diesel, ultr
Y	N	A	All Wheel	GVGAV03.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ03.0	NU4		5	DU	Diesel, ultr
Y	N	A	All Wheel	GVGAJ03.0	NU4		5	DU	Diesel, ultr
Y	N	A	All Wheel	GVGAV03.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV06.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		406	GP	Gasoline (F
Y	N	F	2-Wheel D	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		455	GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ03.0	NU4		5	DU	Diesel, ultr
Y	N	A	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAT02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
N	N	A	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
N	N	A	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV04.	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV04.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV06.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F

Y	N	A	All Wheel IGVGAV06.	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAV04.	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAV06.	15		GP	Gasoline (F
Y	N	R	2-Wheel DGVGAV06.	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IGVGAV06.	15		GPR	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IGVGAV06.	15		GPR	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IGVGAV05.	15		GP	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IGVGAV05.	15		GP	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DGVGAJ02.0	15		GP	Gasoline (F
N	N	F	2-Wheel DGVGAJ02.0	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAV03.	15		G	Gasoline (F
Y	N	F	2-Wheel DGVGAV00.0VZZ			83EL	Electricity
Y	N	F	2-Wheel DGVGAV00.0VZZ			83EL	Electricity
tomated Manual with paddles)	N	F	2-Wheel DGVGAV02.	15		GP	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Manual with paddles)	N	A	All Wheel IGVGAV02.	15		GP	Gasoline (F
N	N	A	All Wheel IGVGAV02.	15		GP	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
ended.	N	F	2-Wheel DGVGAV01.	15		G	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DGVGAV01.	15		GP	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Manual with paddles)	N	F	2-Wheel DGVGAV03.	15		G	Gasoline (F
Y	N	F	2-Wheel DGVGAJ02.0	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAJ02.0	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAT03.0NU2		5	DU	Diesel, ultr
Y	N	A	All Wheel IGVGAT03.0	15		G	Gasoline (F

Pollutant	Fuel Unit	Fuel	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG (Unleaded Recommended)	miles per gal	Not exempt					86	12		
MPG (Unleaded Recommended)	miles per gal	Not exempt	79	10						
MPG (Unleaded Recommended)	miles per gal	Not exempt	79	10						
MPG (Unleaded Recommended)	miles per gal	Not exempt					86	10		
MPG (Unleaded Recommended)	miles per gal	Not exempt					91	12		
MPG (Unleaded Recommended)	miles per gal	Not exempt					91	12		
MPG (Unleaded Recommended)	miles per gal	Not exempt					91	12		
MPG (Unleaded Recommended)	miles per gal	Not exempt	81	10						
MPG (Unleaded Recommended)	miles per gal	Not exempt	84	12						
MPG (Unleaded Recommended)	miles per gal	Not exempt	84	12						
MPG (Unleaded Recommended)	miles per gal	Not exempt					98	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt					98	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt					98	16		
ulfur (15 ppm maximum)	miles per gal	Not exempt					98	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt							94	25
ulfur (15 ppm maximum)	miles per gal	Not exempt							94	25
ulfur (15 ppm maximum)	miles per gal	Not exempt					107	15		
MPG (Unleaded Recommended)	miles per gal	Not exempt					107	15		
MPG (Unleaded Recommended)	miles per gal	Not exempt					107	15		
MPG (Unleaded Recommended)	miles per gal	Not exempt					107	15		
MPG (Unleaded Recommended)	miles per gal	Not exempt					90	28		
MPG (Unleaded Recommended)	miles per gal	Not exempt							84	17
MPG (Unleaded Recommended)	miles per gal	Not exempt							84	17
MPG (Unleaded Recommended)	miles per gal	Truck								
ulfur (15 ppm maximum)	miles per gal	Truck								
MPG (Unleaded Recommended)	miles per gal	Truck								
MPG (Unleaded Recommended)	miles per gal	Truck								
MPG (Unleaded Recommended)	miles per gal	Not exempt							94	25
MPG (Unleaded Recommended)	miles per gal	Not exempt					86	10		
MPG (Unleaded Recommended)	miles per gal	Not exempt					90	13		
MPG (Unleaded Recommended)	miles per gal	Not exempt					90	13		
MPG (Unleaded Recommended)	miles per gal	Not exempt	84	13						
MPG (Unleaded Recommended)	miles per gal	Not exempt	84	13						
MPG (Unleaded Recommended)	miles per gal	Not exempt	81	10						
MPG (Unleaded Recommended)	miles per gal	Not exempt					98	16		
MPG (Unleaded Recommended)	miles per gal	Not exempt							94	25
MPG (Unleaded Recommended)	miles per gal	Not exempt					100	15		
MPG (Unleaded Recommended)	miles per gal	Truck								
MPG (Unleaded Recommended)	miles per gal	Not exempt	74	13						
MPG (Unleaded Recommended)	miles per gal	Not exempt								
MPG (Unleaded Recommended)	miles per gal	Not exempt	74	13						
MPG (Unleaded Recommended)	miles per gal	Not exempt	89	11						
MPG (Unleaded Recommended)	miles per gal	Not exempt	89	11						
MPG (Unleaded Recommended)	miles per gal	Not exempt	86	7						

Unleaded Recommended)	MPG	miles per gN	Not exempt	86	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	102	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	102	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt			101	11	
Unleaded Required)	MPG	miles per gN	Not exempt					
Unleaded Required)	MPG	miles per gN	Not exempt					
Unleaded Recommended)	MPG	miles per gN	Not exempt					
Unleaded Recommended)	MPG	miles per gN	Not exempt					
Unleaded Recommended)	MPG	miles per gN	Not exempt				85	15
Unleaded Recommended)	MPG	miles per gN	Not exempt				85	15
Unleaded Recommended)	MPG	miles per gN	Not exempt				85	15
Unleaded Recommended)	MPG	miles per gN	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	81	7			
Unleaded Recommended)	MPG	miles per gN	Not exempt	94	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	94	13			
Unleaded Recommended)	MPG	miles per gN	Not exempt	94	13			
	MPG	miles per gN	Not exempt				91	17
	KW-HR/10	kilowatt-hN	Not exempt				91	17
Unleaded Recommended)	MPG	miles per gN	Not exempt	77	11			
Unleaded Recommended)	MPG	miles per gN	Not exempt				93	16
Unleaded Recommended)	MPG	miles per gN	Not exempt				93	16
Unleaded Recommended)	MPG	miles per gN	Not exempt				93	16
Unleaded Recommended)	MPG	miles per gN	Not exempt				93	16
Unleaded Recommended)	MPG	miles per gN	Not exempt			94	30	
Unleaded Recommended)	MPG	miles per gN	Not exempt			94	30	
Unleaded Recommended)	MPG	miles per gN	Not exempt				93	16
Unleaded Recommended)	MPG	miles per gN	Not exempt				93	16
Unleaded Recommended)	MPG	miles per gN	Not exempt			94	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt			94	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt			94	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt			94	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt			94	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt			102	16	
Unleaded Recommended)	MPG	miles per gN	Not exempt			102	16	
Unleaded Recommended)	MPG	miles per gT	Truck					
Unleaded Recommended)	MPG	miles per gT	Truck					
ulfur (15 ppm, maximum)	MPG	miles per gT	Truck					
Unleaded Recommended)	MPG	miles per gT	Truck					

Annual Fu	EPA Calcu	Comment	City2 FE (H	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
1650	1650	fuel costs corrected							
1600	1600	fuel costs corrected							
1750	1750	fuel cost corrections							
1650	1650	fuel cost corrections							
1850	1850								
2000	2000		15	22	18				19.5
1900	1900								
2050	2050		15	21	17				19
2000	2000		15	22	18				19.5
1900	1900								
1750	1750								
1900	1900	CO2 unrounded and rounded values corrected, typo. further CO2 corrections							
2050	2050								
1700	1700	release date change,added configuration after EPA confirmatory testing, corrected unadj unr							
2050	2050								
1700	1700	added configuration after EPA confirmatory testing to base level, corrected unadj unrnd com							
1800	1800								
2250	2250								
2250	2250	engine code correction, data sub used							
2900	2900								
2050	2050		15	21	17				19.2
2150	2150								
2150	2150								
2150	2150		14	19	16				17.4
1850	1850	corrected fuel economy rating							
2350	2350								
1900	1900								
2750	2750	50/50 weighting of best and worse (D&S) testing							
1900	1900								
2350	2350								
2500	2500								
2350	2350								
2500	2500								
2350	2350								
2350	2350	corrected typo adj unrounded city CO2 value.							
2350	2350								
2500	2500	correct annual and five year fuel additional cost values							
2600	2600								
1750	1750	fuel costs correction							
1750	1750	fuel cost correction							
2000	2000								
2600	2600	engine configuration changed to 520 HP = #6, release date changed							
3300	3300	changed to a gasoline fueled label from flex fueled concept. 15% ethanol max							
2900	2900								

3300	3300	this is corrected to drop flex fueled concept for 2016; 15% ethanol max
2900	2900	
3300	3300	this is corrected to drop flex fueled concept for 2016, 15% ethanol max
3800	3800	Vehicle model equipped with cylinder deactivation with a switch. Active and inactive tests av
3800	3800	
4100	4100	corrected ETW with RLHP for SV
2900	2900	release date change
3100	3100	release date change
1600	1600	
1600	1600	5 YR FUEL SAVINGS CORRECTED
1750	1750	
1600	1600	
1750	1750	release date changed
1750	1750	
2000	2000	
2000	2000	
2250	2250	recommended fuel correction
550	0	
550	550	
2000	2000	
1550	1550	fuel costs corrected
1500	1500	
1900	1900	
2000	2000	
1550	1550	
1550	1550	
1600	1600	fuel cost correction, 5 year cost correction, add equivalent engine codes data substitution use
1600	1600	fuel cost correction, add equivalent engine codes, data substitution used
1400	1400	
1550	1550	gal/100 miles corrected
1650	1650	combined typo unadjusted MPG value corrected, adjusted unrounded CO2 value corrected
1650	1650	adjusted unrounded CO2 values corrected
1100	1100	
1550	1550	release date change
1950	1950	recommended fuel change correction, release date now Sept 23rd
2150	2150	
2150	2150	
2100	2100	
2350	2350	

Hwy2 Unit	Comb2	CO2	Hwy2	Unrd Hwy2 Unrd	Comb2	Unrd Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8	MPG	miles per g	
30	22.7545	15.0024	21.384	17.3296	287	E	Ethanol (E8	MPG	miles per g	
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8	MPG	miles per g	

nd combined CO2 value

bined CO2

28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E8	MPG	miles per g	
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E8	MPG	miles per g	

eraged together at 50/50. Data substitution for engine code with lesser HP.

d

Alternative Fuel									
Fuel2 AltmCity	CO2 I	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	4	Compact C
2150	400	281	347	2150	SIDI; FFV;	2	2	4	Compact C
					SIDI;	2	2	4	Compact C
2300	410	288	355	2300	SIDI; FFV;	2	2	3	Subcompa
2150	400	281	347	2150	SIDI; FFV;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
						2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
						2	2	5	Midsize Ca
						2	2	6	Large Cars
					SIDI;	2	2	6	Large Cars
					SIDI;	2	2	6	Large Cars
					SIDI;	2	2	6	Large Cars
2300	406	300	358	2300	SIDI; FFV;	2	2	7	Small Stati
					SIDI;	2	2	4	Compact C
					SIDI;	2	2	4	Compact C
2450	450	320	392	2450	SIDI; FFV;	2	2	31	Small SUV 4WD
						2	2	31	Small SUV 4WD
					SIDI;	2	2	31	Small SUV 4WD
					SIDI;	2	2	31	Small SUV 4WD
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	4	Compact C
					SIDI;	2	2	4	Compact C
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	31	Small SUV 4WD
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	1	Two Seate
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	4	Compact C
						2	2	4	Compact C
					SIDI;	2	2	3	Subcompa

	2	2	3 Subcompa
SIDI;	2	2	5 Midsize Ca
	2	2	5 Midsize Ca
	1	1	5 Midsize Ca
	2	2	1 Two Seate
	2	2	1 Two Seate
SIDI & PFI;	2	2	1 Two Seate
SIDI & PFI;	2	2	1 Two Seate
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	3 Subcompa
SIDI;	2	2	3 Subcompa
SIDI;	2	2	3 Subcompa
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
			4 Compact C
			4 Compact C
SIDI;	2	2	3 Subcompa
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	7 Small Stati
SIDI;	2	2	7 Small Stati
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	5 Midsize Ca
SIDI;	2	2	5 Midsize Ca
SIDI;	2	2	30 Small SUV 2WD
SIDI;	2	2	31 Small SUV 4WD
	2	2	33 Standard SUV 4W
SIDI;	2	2	33 Standard SUV 4W

SC	Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
	car	Vehicle Specific 5-cycle	6/22/2015		18159		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18160		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18162		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18161		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18128		N	N		
	car	Derived 5-cycle label	6/22/2015		18103		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18121		N	N		
	car	Derived 5-cycle label	6/22/2015		18105		N	N		
	car	Derived 5-cycle label	6/22/2015		18104		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18122		N	N		
	car	Vehicle Specific 5-cycle	3/23/2015		17682		N	N		
	car	Derived 5-cycle label	3/23/2015		17714		N	N		
	car	Derived 5-cycle label	1/8/2015		17475		N	N		
	car	Vehicle Specific 5-cycle	3/30/2015		17658		N	N		
	car	Derived 5-cycle label	1/8/2015		17474		N	N		
	car	Vehicle Specific 5-cycle	3/30/2015		17659		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18062		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18055		N	N		
	car	Vehicle Specific 5-cycle	6/8/2015		17744		N	N		
	car	Vehicle Specific 5-cycle	7/13/2015		18361		N	N		
ons	car	Derived 5-cycle label	6/22/2015		18102		N	N		
	car	Derived 5-cycle label	6/22/2015		18130		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18131		N	N		
		Derived 5-cycle label	6/22/2015		18101		N	N		
		Vehicle Specific 5-cycle	6/22/2015		18088		N	N		
		Vehicle Specific 5-cycle	6/22/2015		18118		N	N		
		Vehicle Specific 5-cycle	6/22/2015		18216		N	N		
	car	Vehicle Specific 5-cycle	6/8/2015		17565		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18132		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18113		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18116		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18114		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18117		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18115		N	N		
	car	Vehicle Specific 5-cycle	3/23/2015		17715		N	N		
	car	Vehicle Specific 5-cycle	3/23/2015		17657		N	N		
	car	Vehicle Specific 5-cycle	6/8/2015		17589		N	N		
		Vehicle Specific 5-cycle	6/22/2015		18120		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18213		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18212		N	N		
	car	Vehicle Specific 5-cycle	6/22/2015		18129		N	N		
	car	Vehicle Specific 5-cycle	5/26/2015		17559		N	N		
	car	Vehicle Specific 5-cycle	7/20/2015		18239		N	N		
	car	Vehicle Specific 5-cycle	5/26/2015		17560		N	N		

car	Vehicle Specific 5-cycle label	7/20/2015	18241	N	N
car	Vehicle Specific 5-cycle label	5/15/2015	17561	N	N
car	Vehicle Specific 5-cycle label	6/15/2015	18240	N	N
car	Derived 5-cycle label	1/14/2015	17486	N	N
car	Vehicle Specific 5-cycle label	5/1/2015	17766	N	N
car	Vehicle Specific 5-cycle label	5/1/2015	17787	N	N
car	Vehicle Specific 5-cycle label	9/14/2015	18710	N	N
car	Vehicle Specific 5-cycle label	3/14/2016	18711	N	N
car	Derived 5-cycle label	7/20/2015	18391	N	N
car	Derived 5-cycle label	7/20/2015	18461	N	N
car	Vehicle Specific 5-cycle label	7/20/2015	18398	N	N
car	Derived 5-cycle label	7/20/2015	18392	N	N
car	Vehicle Specific 5-cycle label	7/27/2015	18576	N	N
car	Vehicle Specific 5-cycle label	7/20/2015	18399	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18217	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18218	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18370	N	N
car	Electric Vehicle 2-cycle label	8/13/2015	18694	N	N
car	Electric Vehicle 2-cycle label	8/13/2015	18694	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18307	N	N
car	Derived 5-cycle label	7/13/2015	18183	N	N
car	Derived 5-cycle label	7/13/2015	18185	N	N
car	Vehicle Specific 5-cycle label	6/22/2015	18133	N	N
car	Vehicle Specific 5-cycle label	6/22/2015	18134	N	N
car	Derived 5-cycle label	7/13/2015	18176	N	N
car	Derived 5-cycle label	7/13/2015	18179	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18365	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18366	N	N
car	Derived 5-cycle label	8/17/2015	18665	N	N
car	Derived 5-cycle label	7/20/2015	18462	N	N
car	Derived 5-cycle label	7/20/2015	18570	N	N
car	Vehicle Specific 5-cycle label	7/20/2015	18464	N	N
car	Vehicle Specific 5-cycle label	8/17/2015	18676	N	N
car	Derived 5-cycle label	9/23/2015	18620	N	N
car	Vehicle Specific 5-cycle label	9/23/2015	18621	N	N
	Derived 5-cycle label	7/13/2015	18215	N	N
	Derived 5-cycle label	7/13/2015	18214	N	N
D	Vehicle Specific 5-cycle label	7/13/2015	17922	N	N
D	Derived 5-cycle label	7/27/2015	18591	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve System	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve System	
N	N	N			Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	N			Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	N			Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	Electro/Hy	Y	Audi Valve System	
N	N	Engine Coc	N		Y	Electro/Hy	Y	Audi Valve System	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	N			N		N		
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	Y	12 to 6 cyli	Y	Intake and	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVBattery(s)	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	N		Y	CONTINUC	Y	Audi Valve System - Exhaust	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve System	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve System	
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	N		Y	INLET AND	N		
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	

N	N	Engine Coc	N	Y	INLET AND	N
N	N	Engine Coc	Y	Deactivatic	Y	Continuou Y Multi-lobe Int/Exh cam desig
N	N	Engine Coc	N	Y	INLET AND	N
N	N	Engine cod	Y	Cylinder d	Y	Variation c N
N	N	Engine Coc	Y	ELECTRON	Y	HYDRAULI N
N	N	Engine Coc	Y	ELECTRON	Y	HYDRAULI N
N	N	ENGINE CC	Y	Soft COD.	Y	INLET AND Y Fixed 1: One Setting of Valve
N	N	ENGINE CC	Y	Soft COD.	Y	INLET AND Y Fixed 1: One Setting of Valve
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	N		Y	position of	N
N	N	N		Y	position of	N
N	N	N		Y	position of	N
N	N					Battery(s)
N	N					Battery(s)
N	N	N		Y	CONTINUC	N
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	Engine Coc	N	Y	CONTINUC	Y Audi Valve System - Exhaust
N	N	Engine Coc	N	Y	CONTINUC	Y Audi Valve System - Exhaust
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	2.0L Engin	N	Y	CONTINUC	Y Audi Valve System
N	N	2.0L Engin	N	Y	CONTINUC	Y Audi Valve System
N	N	Engine Coc	N	Y	MECHANIC	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	N		Y	MECANICA	N Battery(s)
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine cod	N	Y	Electronic	N
N	N	N		Y	position of	N
N	N	N		Y	position of	N
N	N	Engine Coc	N	N		N
N	N	N		Y	INTAKE / E	N

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
Energy St									
R / EXHAUST									
R / EXHAUST									
R / EXHAUST									
R / EXHAUST									
alves to a valve lift of 1 mm (all valves adjusted), the fuel injection and ignition are deactivated as long as the									
tolled and hydraulically adjusted.									
R / EXHAUST									
R / EXHAUST									
	1	Lithium Ion		266	5	37	On-Board		
alves to a valve lift of 1 mm (all valves adjusted), the fuel injection and ignition are deactivated as long as the									
valves only									
alves to a valve lift of 1 mm (all valves adjusted), the fuel injection and ignition are deactivated as long as the									
alves to a valve lift of 1 mm (all valves adjusted), the fuel injection and ignition are deactivated as long as the									
alves to a valve lift of 1 mm (all valves adjusted), the fuel injection and ignition are deactivated as long as the									
alves to a valve lift of 1 mm (all valves adjusted), the fuel injection and ignition are deactivated as long as the									
ECHANICAL-HYDRAULIC									
alves to a valve lift of 1 mm (all valves adjusted), the fuel injection and ignition are deactivated as long as the									

ECHANICAL-HYDRAULIC

alves. The first valve lift profile (all valves designed) is for injection and ignition of reactive reactions as described

ECHANICAL-HYDRAULIC

aust valves on a single camshaft. No change in valve overlaps.

ONTINUOUSLY VVT

ONTINUOUSLY VVT

ECHANICAL-HYDRAULIC

ECHANICAL-HYDRAULIC

AMS

AMS

AMS

AMS

AMS

AMS

controlled and hydraulically adjusted

controlled and hydraulically adjusted

controlled and hydraulically adjusted

	27	Lithium Ion	363	75	76.1 Off-Board
	27	Lithium Ion	363	75	76.1 Off-Board

valves only

valves only

AND OUTLET CAMS

AMS

AMS

AMS

ND OUTLET CAMS	1	Lithium Ion	220	1100	27 On-Board

AMS

controlled and hydraulically adjusted

controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger

est drive 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km

Electrical Regen Brake	Front Whe	1 Other
Electrical Regen Brake	Front Whe	1 Other
Electrical RBRAKE PED	Front Whe	1 Other

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
		40		GDI	Spark Ignit	N	N	N	5W40 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignit	N		N	5W40
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
				MFI	Multipoint	N		N	5W30 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW

		MFI	Multipoint	N	N	5W30 VW
h		GDI	Spark Ignition Direct Injection		N	5W30 VW
		MFI	Multipoint	N	N	5W30 VW
		MFI	Multipoint/sequential fuel injection		N	0W40 / VW
		MFI	Multipoint/sequential fuel injection		N	5W30 VW
		MFI	Multipoint/sequential fuel injection		N	5W30 VW
		GDPI	Spark Ignition direct & ported injection		N	5W30 VW
		GDPI	Spark Ignition direct & ported injection		N	5W30 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W-40 VW
Synchron M	85			N Y		
Synchron M	85			N Y		
		GDI	Spark Ignition Direct Injection		N	5W40 / VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignit	N	N	5W40
		GDI	Spark Ignit	N	N	5W40
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
3 PHASE PI	15	GDI	Spark Ignit	N N	N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		CRDI	Common Rail Direct Diesel Injection		N	5W30 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AV-S	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M6)						
Y	Yes	Auto(AM-S	Auto(AM-S7)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y50700	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AM-S	Auto(AM-S7)						
N	No	Manual(M	Manual(M6)						
N	No	Auto(AM-S	Auto(AM-S7)						
N	No	Manual(M	Manual(M6)						
N	No	Auto(AM-S	Auto(AM-S7)						
N50700	No	Auto(AM-S	Auto(AM-S7)						
N50700	No	Auto(AM-S	Auto(AM-S7)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S	Auto(AM-S	TT Coupe quattro					
N	No	Auto(AM-S	Auto(AM-S	TT Coupe quattro					
N	No	Auto(AM-S	Auto(AM-S6)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N50700	No	Auto(S8)	Auto(S8)						

N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
Y	Yes	Auto(AM-S	Auto(AM-S7)	
Y	Yes	Auto(AM-S	Auto(AM-S7)	
N	No	Auto(AM-S	Auto(AM-S7)	
N	No	Auto(AM-S	Auto(AM-S7)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M5)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(A1)	Auto(A1)	
N	No	Auto(A1)	Auto(A1)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M5)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M5)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
Y	Yes	Auto(AM-S	Auto(AM-S7)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

| EPA Calcu | EPA Calculated Gas G | [redacted] | [redacted] | [redacted]

18.3	[redacted]	2	2 GVGAV06.	5
21.9		3	3 GVGAV04.	5
18.3		2	2 GVGAV06.	5
17.3		1	1 GVGAV06.	5
16.4		1	1 GVGAV06.	5
15		1	1 GVGAV06.	5
20.8		3	3 GVGAV05.	5
20.4		3	3 GVGAV05.	5
37.1		7	7 GVGAV02.	7
37.4		7	7 GVGAV02.	7
33.7		6	6 GVGAV02.	7
37.1		7	7 GVGAV02.	7
34.2		6	6 GVGAV02.	7
33.7		6	6 GVGAV02.	7
32.2		6	6 GVGAV02.	7
31.6		6	6 GVGAV02.	7
24.8		4	4 GVGAV03.	5
		10	10 GVGAV00.	10
		10	10 GVGAV00.	10
32.4		6	6 GVGAV02.	5
38.9		7	7 GVGAV02.	9
39.3		7	7 GVGAV02.	9
32.9		6	6 GVGAV02.	5
31.2		6	6 GVGAV02.	5
38.6		7	7 GVGAV02.	9
38.1		7	7 GVGAV02.	9
35.9		7	7 GVGAV02.	9
35.8		7	7 GVGAV02.	9
43.8		8	8 GVGAV01.	5
39.4		7	7 GVGAV02.	7
36.4		6	6 GVGAV02.	7
34.9		6	6 GVGAV02.	7
60.8		9	9 GVGAV01.	7
39.1		7	7 GVGAV02.	7
28.5		5	5 GVGAV03.	5
29.7		5	5 GVGAJ02.(	5
29.6		5	5 GVGAJ02.(	5
30.6		5	4 GVGAT03.(	5
25		4	4 GVGAT03.(	5

| | | |

GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAJ02.C	5
GVGAJ02.C	5

GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5

[illegible]	You Save $	You Spend $	City CO2	Hwy CO2	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	750		379	267	328			
	1000		362	256	314			
	250		379	280	334			
	750		366	271	323			
		250	371	303	341			
		1000	415	295	361			
		500	397	276	343			
		1250	424	303	370			
		1000	415	295	361			
		500	397	276	343			
	250		357	252	310			
		500	398	269	340			
		1250	436	296	373			
	500		403	270	343			
		1250	436	296	373			
	500		403	270	343			
	0		426	280	360			
		2250	473	303	397			
		2250	492	310	410			
		5500	640	403	534			
		1250	420	317	373			
		1750	451	313	389			
		1750	446	316	387			
		1750	452	322	393			
		250	430	328	385			
		2750	496	347	429			
		500	369	298	337			
		4750	614	355	497			
		500	381	289	340			
		2750	488	321	413			
		3500	519	341	439			
		2750	488	321	413			
		3500	519	341	439			
		2750	500	341	428			
		2750	497	332	423			
		2750	505	331	427			
		3500	534	331	442			
		4000	528	373	458			
	250		373	290	336			
	250		373	290	336			
		1000	386	323	358			
		4000	580	347	475			
		7500	710	421	580			
		5500	638	370	517			

	7500	736	443	604
	5500	638	370	517
	7500	736	443	604
	10000	791	491	656
	10000	836	481	676
	11500	887	532	727
	5500	617	429	532
	6500	634	442	547
1000		360	263	316
1000		358	261	314
250		385	292	343
1000		360	263	316
250		383	288	340
250		385	292	343
	1000	403	283	349
	1000	426	279	360
	2250	523	351	446
6250		0	0	0
6250		0	0	0
	1000	405	292	354
1250		352	247	305
1500		350	240	300
	500	383	294	343
	1000	406	289	354
1250		348	253	305
1250		358	248	309
1000		358	271	319
1000		355	258	311
2000		321	228	279
1250		350	245	302
750		370	265	323
750		383	273	333
3500		212	184	200
1250		355	236	302
	750	449	319	390
	1750	431	344	392
	1750	435	344	394
	1500	502	356	437
	2750	520	391	462

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char	PHEV Tota
309	191	255.9	378.7	267.1	328.5
289	188	243.6	362.1	255.5	314.1
305	200	257.8	378.6	280.1	334.3
294	198	250.8	366	271	323.2
292	199	250.2	371.2	303.3	340.6
327	210	274.4	415	295	361
320.1	202	267	396.8	276.4	342.5
335	216	281.4	424.4	303.1	369.8
327	210	274.4	415	295	361
320.1	202	267	396.8	276.4	342.5
278.5	178	233.3	357.1	251.9	309.8
312.5	191	257.8	397.9	269.4	340.1
345	211	284.7	436.2	296.4	373.3
326.3	193.3	266.4	402.7	270.5	343.2
345	211	284.7	436.2	296.4	373.3
326.3	193.3	266.4	402.7	270.5	343.2
339	198	275.6	425.6	280.1	360.1
376.5	225	308.3	473.4	302.9	396.7
396	226	319.5	492.3	309.7	410.1
515	310	422.8	640.3	403.3	533.6
331	226	283.8	419.7	316.6	373.3
357.5	223	297	451	312.5	388.7
357	230	299.9	445.6	315.7	387.1
358	230	300.4	451.6	321.9	393.2
348	231	295.4	430.5	328.5	384.6
390	251	327.4	496	347	429
380	223	309.4	369	298	337
499.5	269.5	396	613.8	354.8	497.3
311	214	267.4	381.4	289.2	339.9
396	248	329.4	488	321	412.8
443	266	363.4	519	341	438.9
396	248	329.4	488	321	412.8
443	266	363.4	519	341	438.9
401	256	335.8	500	341	428.4
403.5	241	330.4	496.9	331.8	422.6
407.5	238	331.2	505.4	331.1	427
444	243	353.6	534	330.6	442.5
427	269	355.9	528	372.7	458.1
307.9	216.6	266.8	373.4	289.6	335.6
307.9	216.6	266.8	373.4	289.6	335.6
314	233	277.6	385.7	323.4	357.7
462	263	372.4	580	347	475.2
576	314	458.1	709.5	420.8	579.6
511	278	406.2	638.3	369.6	517.4

617	333	489.2	736.3	442.9	604.3	
511	278	406.2	638.3	369.6	517.4	
617	333	489.2	736.3	442.9	604.3	
645.5	355.5	515	791	490.9	656	
705	353	546.6	836	481	676.2	
756.1	403.3	597.3	887.1	532.1	727.4	
512	328	429.2	616.6	428.8	532.1	
521	336	437.8	633.8	441.8	547.4	
280.8	185.9	238.1	360.4	262.6	316.4	
278.4	185	236.4	357.6	261.3	314.3	
309.3	204.2	262	384.6	292.2	343	
280.8	185.9	238.1	360.4	262.6	316.4	
299.7	204.7	257	382.8	287.9	340	
309.3	204.2	262	384.6	292.2	343	
327.3	207.8	273.5	402.7	282.8	348.8	
346.5	203.1	282	426	279.1	359.9	
434	265	358	523	351	445.6	
0	0	0	0	0	0	3.7
0	0	0	0	0	0	3.7
321	213	272.4	404.7	291.7	353.9	
274	174	229	352.4	246.5	304.7	
272	169	225.6	350.1	239.8	300.5	
314	217	270.4	383	294	343	
334	223	284	406.3	289.2	353.6	
270	179	229	347.7	253.3	305.2	
279	175	232.2	358.3	247.9	308.6	
288	195	246.2	358	270.7	318.7	
294	191	247.7	354.6	257.9	311.1	
245	154	204.1	320.6	227.7	278.8	
271.8	172.5	227.1	349.8	244.5	302.4	
288.6	188	243.3	369.7	265.4	322.8	
305.8	189.6	253.5	382.9	272.9	333.4	
155	136	146.4	212.1	184.3	199.6	
276.4	166.4	226.9	355.3	236.3	301.8	
372	238	311.7	449	319	390.5	
340.8	246.4	298.3	431.3	344	392	
343.8	246.3	299.9	434.9	343.9	393.9	
401	248	332.2	502.3	356.5	436.7	
416	281	355.2	520.1	390.6	461.8	

[illegible]	DISTANCE	Comb Vol Higher	Final Label	EPA_FUEL	EPA_GHG	EPA_AMT
N		3.7	3.7			
N		3.6	3.6			
N		3.8	3.8			
N		3.7	3.7			
N		3.7	3.7			
N		4	4			
N		3.8	3.8			
N		4.2	4.2			
N		4	4			
N		3.8	3.8			
Y		3.6	3.6			
Y		3.8	3.8			
N		4.2	4.2			
N		3.3	3.3			
N		4.2	4.2			
N		3.3	3.3			
N		3.6	3.6			
N		4.5	4.5			
N		4.5	4.5			
N		5.9	5.9			
N		4.2	4.2			
N		4.3	4.3			
N		4.3	4.3			
N		4.3	4.3			
N		3.7	3.7			
N		4.8	4.8			
N		3.8	3.8			
N		5.6	5.6			
N		3.8	3.8			
N		4.8	4.8			
N		5	5			
N		4.8	4.8			
N		5	5			
N		4.8	4.8			
N		4.8	4.8			
N		4.8	4.8			
N		5	5			
N		5.3	5.3			
N		3.8	3.8			
N		3.8	3.8			
N		4	4			
N		5.3	5.3			
N		6.7	6.7			
N		5.9	5.9			

N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	7.7	7.7
N	8.3	8.3
N	5.9	5.9
N	6.2	6.2
N	3.6	3.6
N	3.6	3.6
N	3.8	3.8
N	3.6	3.6
N	3.8	3.8
N	3.8	3.8
N	4	4
N	4	4
N	5	5
N	0	0
N	0	0
N	4	4
N	3.4	3.4
N	3.3	3.3
N	3.8	3.8
N	4	4
N	3.4	3.4
N	3.4	3.4
N	3.6	3.6
N	3.6	3.6
Y	3.1	3.1
N	3.4	3.4
N	3.7	3.7
N	3.7	3.7
N	2.3	2.3
N	3.4	3.4
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.2	4.2
N	5.3	5.3

[redacted]EPA_UNRD

| [illegible] | [illegible] | [illegible] |

Mr Richard E Thomas Jr
Mr Richard E Thomas Jr
Mr Richard E Thomas Jr

mined)

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 7/29/2015 6:34:37 PM
Subject: Confirmatory Test Thresholds/Cut Points

Hi Dave;

I thought that recently you told me that you were assigned the job of creating new threshold values for confirmatory testing. Are you making any progress toward establishing new cut points to replace these very old criteria?

Just wondering when we can expect new cut points. It seems now a days everything that is not confirmed by EPA must get manufacture's confirmatory tests, and we have test capacity problems so that some of our US confirmatory testing gets pushed aside by the factory labs to test vehicles for other countries.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Thur 7/30/2015 1:21:45 PM
Subject: RE: Confirmatory Test Thresholds/Cut Points

Richard,

I sent the DRAFT revised cut point guidance letter around for EPA internal review yesterday. Hopefully, we can get EPA buy-off in a week and OGC approval in another week and get the letter out by mid-to late August.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Wednesday, July 29, 2015 2:35 PM
To: Good, David
Subject: Confirmatory Test Thresholds/Cut Points

Hi Dave;

I thought that recently you told me that you were assigned the job of creating new threshold values for confirmatory testing. Are you making any progress toward establishing new cut points to replace these very old criteria?

Just wondering when we can expect new cut points. It seems now a days everything that is not confirmed by EPA must get manufacture's confirmatory tests, and we have test capacity problems so that some of our US confirmatory testing gets pushed aside by the factory labs to test vehicles for other countries.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

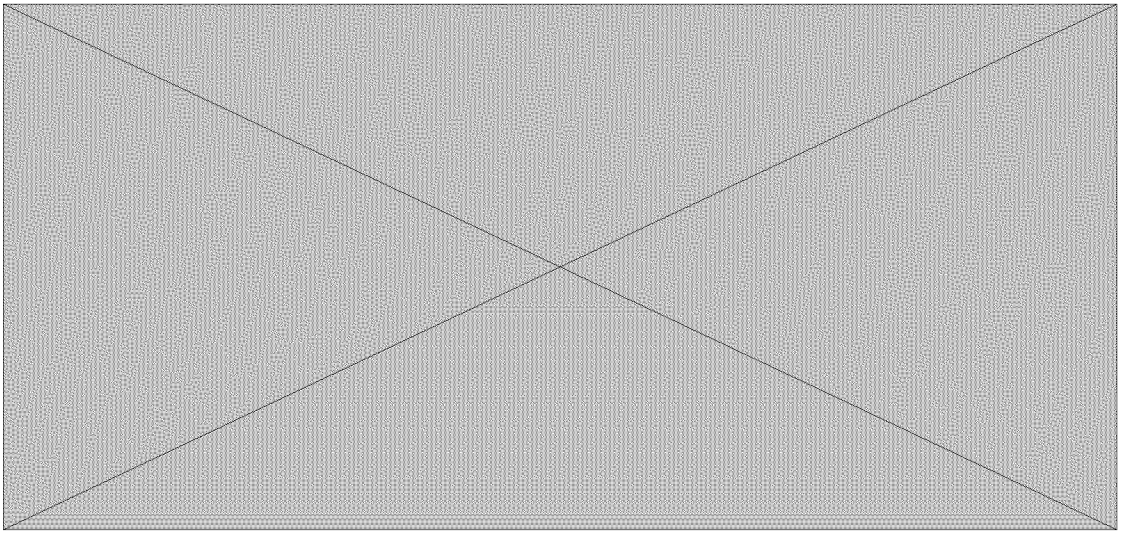
To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Thur 7/30/2015 2:29:06 PM
Subject: TDI generations
removed.txt

Jim,

Sorry for the delay in my response to your 2.0l TDI generations question?

This chart from my German colleague might help clarify what generation came when. Although the 14.5 model year identified in the chart was actually introduced in North America as 2015 model year.

The main technical differences between generations 1 and 2 was related to changes in after-treatment technology, NSC vs. SCR. The generation 3 engines also included a change to an integral liquid-cooled intercooler/intake manifold assembly and a closer coupled DPF and Catalyst assembly as the major changes.



Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Snyder, Jim
Sent: Thur 7/30/2015 9:43:01 PM
Subject: Cold CO testing

From 1066.710. It specifically says that control for A/C should be turned off and control set to defrost. Now the A/C *compressor* will likely cycle on during defrost mode in most cars but that's a function of the vehicle design.

(c) *Heater and defroster.* During the test, operate the vehicle's interior climate control system with the heat on and set to primarily defrost the front window. Turn air conditioning off. You may not use any supplemental auxiliary heat during this testing. You may set the heater to any temperature and fan setting during vehicle preconditioning.

(1) *Manual control.* Unless you rely on automatic control as specified in paragraph (c)(2) of this section, take the following steps to control heater settings:

(i) Set the climate control system as follows before the first acceleration (t=20 s), or before starting the vehicle if the climate control system allows it:

(A) *Temperature.* Set controls to maximum heat. For automatic control systems running in manual mode, set the heater control to 72 °F or higher.

(B) *Fan speed.* Set the fan speed to full off or the lowest available speed if a full off position is not available.

(C) *Airflow direction.* Direct airflow to the front window (window defrost mode).

(D) *Air source.* If independently controllable, set the system to draw in outside air.

(ii) At the second idle of the test cycle, which occurs 125 seconds after the start of the test, set the fan speed to maximum. Complete by 130 seconds after the start of the test. Leave temperature and air source settings unchanged.

(iii) At the sixth idle of the test interval, which occurs at the deceleration to zero miles per hour 505 seconds after the start of the test, set the fan speed to the lowest setting that maintains air flow. Complete these changes by 510 seconds after the start of the test. You may use different vent and fan speed settings for the remainder of the test. Leave the temperature and air source settings unchanged.

(2) *Automatic control.* For vehicles with automatic control systems running in automatic mode, set the temperature to 72 °F and the air flow control to the front window defrost mode for the

whole test.

(3) *Multiple-zone systems.* For vehicles that have separate driver and passenger controls or separate front and rear controls, you must set all temperature and fan controls as described in paragraphs (c)(1) and (2) of this section, except that rear controls need not be set to defrost the front window.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Fri 7/31/2015 10:53:44 AM
Subject: RE: TDI generations
removed.txt
TDI Generations.pdf

Jim,

I've attached a pdf of the chart. It's a little fuzzy but readable.

Bill Rodgers

VWGoA EEO

(248) 754-4219

From: Rodgers, William (EEO)
Sent: Thursday, July 30, 2015 10:29 AM
To: "Jim Snyder' (Snyder.Jim@epamail.epa.gov)'
Cc: Giles, Michael; Allen, Gregory (EEO)
Subject: TDI generations

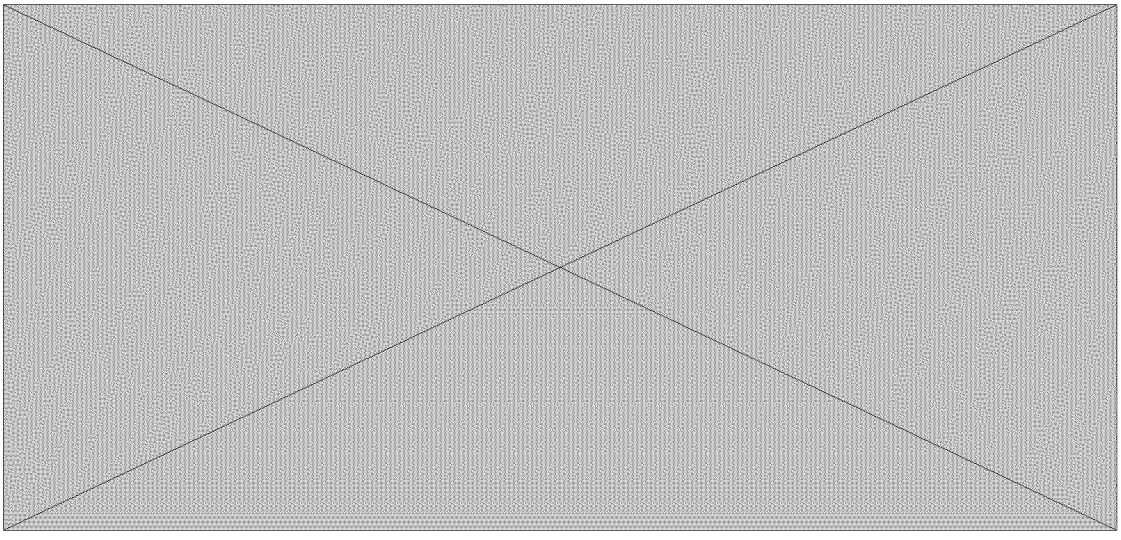
Jim,

Sorry for the delay in my response to your 2.0l TDI generations question?

This chart from my German colleague might help clarify what generation came when. Although the 14.5 model year identified in the chart was actually introduced in North America as 2015 model year.

The main technical differences between generations 1 and 2 was related to changes in after-treatment technology, NSC vs. SCR. The generation 3 engines also included a change to an

integral liquid-cooled intercooler/intake manifold assembly and a closer coupled DPF and Catalyst assembly as the major changes.



Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

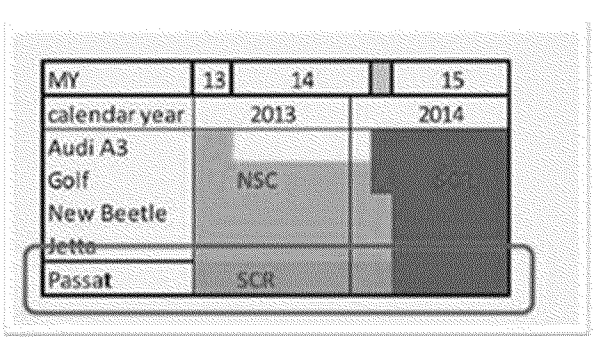
Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

Like the NSC concepts, also the SCR Passat will be updated to the Gen3 TDI engine with MY2015



To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Rodgers, William (EEO)
Sent: Fri 7/31/2015 6:02:55 PM
Subject: VW Group Decision Information VW324-5-0017/16

Jim,

I just submitted FTP and Hwy test results and Decision Information for the replacement vehicle for Volkswagen test vehicle VW324-3-0108/16 configuration-1 previously randomly selected for confirmatory tests on 6/10/2015. As you might remember we were unable to deliver the car due to a mechanic breakdown. The extent of the failure has not yet been determined so a replacement vehicle was tested to represent that configuration. A Manufacturer retest of the City cycle is required due to high City MPG if waived. Please let us know if you still intend to select this vehicle for confirmatory testing.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 7/31/2015 8:29:54 PM
Subject: DAILY: Car hacking risks could be broader | TrueCar hit with another dealer lawsuit | Honda profits rise 20% | The raging debate on aluminum vs. steel

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July 31, 2015

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Car hacking risk may be broader than Fiat Chrysler, Rosekind says

The cybersecurity issues that led Fiat Chrysler Automobiles to recall 1.4 million vehicles this month could pose a problem for cars and trucks from other automakers, the top U.S. auto safety regulator said today.

TrueCar hit with another dealer lawsuit

A group of 100 auto dealerships that are part of TrueCar's network are

MOST READ (Last 7 days)

New test shows disparities in Ford F-150 crash protection

suing the online carbuying service for misleading consumers about the nature of the fees that dealers pay the company for each sale.

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Honda's quarterly profit jumped 20 percent as strong sales in the U.S. and a weak yen helped to absorb the impact of higher quality-related costs linked to a recall of cars equipped with Takata airbags.

Dodge cancels unfilled '15 Hellcat orders, doubles '16 output

Ford Q2 net soars 44% for strongest auto profit in 15 years

Fiat Chrysler hit with record $105 million U.S. penalty over recalls

Nissan backs away from dealer ad attacking Trump for denouncing Mexican immigrants

Are you ready for the mobile revolution?

80% of dealers say they'll invest in digital, but in 2014, the average dealership only spent about 25% of its ad budget on digital advertising.

Read CDK's new study for tips to help you maximize your digital experience.

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RICHARD TRUETT: Senate passes bill raising automaker fines to $105M

It's too early to settle aluminum vs. steel repair-cost debate

The U.S. Senate passed legislation that will triple the maximum fines automakers pay for violations of motor-vehicle safety laws yet bypassed other measures sought by consumer groups.

It seems like everyone wants to know if the aluminum-bodied Ford F-150 is more expensive to repair than the steel-bodied pickup it replaced. We don't know -- and we won't know for a long time.

REUTERS ANALYSIS

BMW, Apple could rekindle courtship with an eye on car collaboration

Toyota holds Apple, Google at bay with Telenav navigation deal

German carmakers near $3 billion deal for Nokia's maps, report says

Hacked Jeep Cherokee exposes weak underbelly of high-tech cars

VW diesel ad campaign gets sassy

BLOG: DAVE GUILFORD

A new Normal? Don't bet on it

GM recalls 82,620 Cadillac ATS sedans over sunroof issue

Subaru parent's operating profit jumps 70% on surging U.S. sales

Maserati's profits will recover with Levante SUV, Marchionne says

Spain fines GM, Ford, other automakers for anti-competitive practices

BMW drivers collect $1,000 to delay charging i3 in Calif. pilot

American Axle Q2 net grows 12%

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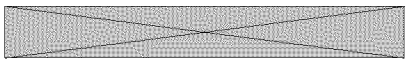

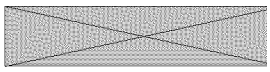

WEBINARS

» Aug. 6 at 2pm ET - New Strategies for Retail
by MakeMyDeal

» Aug. 12 at 2pm ET - Chat & Text
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» Aug. 20 at 2pm ET - Online Marketing
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Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 7/31/2015 8:30:29 PM
Subject: DAILY: Car hacking risks could be broader | TrueCar hit with another dealer lawsuit | Honda profits rise 20% | The raging debate on aluminum vs. steel

Today's most read story

Toyota holds Apple, Google at bay with Telenav navigation deal

July 31, 2015

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Car hacking risk may be broader than Fiat Chrysler, Rosekind says

The cybersecurity issues that led Fiat Chrysler Automobiles to recall 1.4 million vehicles this month could pose a problem for cars and trucks from other automakers, the top U.S. auto safety regulator said today.

TrueCar hit with another dealer lawsuit

A group of 100 auto dealerships that are part of TrueCar's network are

MOST READ (Last 7 days)

New test shows disparities in Ford F-150 crash protection

suing the online carbuying service for misleading consumers about the nature of the fees that dealers pay the company for each sale.

Advertisement

Honda quarterly profit rises 20% as U.S. sales, weak yen offset quality costs

Honda's quarterly profit jumped 20 percent as strong sales in the U.S. and a weak yen helped to absorb the impact of higher quality-related costs linked to a recall of cars equipped with Takata airbags.

Dodge cancels unfilled '15 Hellcat orders, doubles '16 output

Ford Q2 net soars 44% for strongest auto profit in 15 years

Fiat Chrysler hit with record $105 million U.S. penalty over recalls

Nissan backs away from dealer ad attacking Trump for denouncing Mexican immigrants

Are you ready for the mobile revolution?

80% of dealership customers start in 2014, the average dealership only spent about 25% of its ad budget on digital advertising.

Read CDK's new study to learn how to leverage mobility and video to...

Learn how to target those mobile customers to generate more high-quality sales and service leads.

Download the whitepaper.

RICHARD TRUETT: Senate passes bill raising automaker fines to $105M

The U.S. Senate passed legislation that will triple the maximum fines automakers pay for violations of motor-vehicle safety laws yet bypassed other measures sought by consumer groups.

It's too early to settle aluminum vs. steel repair-cost debate

It seems like everyone wants to know if the aluminum-bodied Ford F-150 is more expensive to repair than the steel-bodied pickup it replaced. We don't know -- and we won't know for a long time.

REUTERS ANALYSIS

BMW, Apple could rekindle courtship with an eye on car collaboration

Toyota holds Apple, Google at bay with Telenav navigation deal

German carmakers near $3 billion deal for Nokia's maps, report says

Hacked Jeep Cherokee exposes weak underbelly of high-tech cars

VW diesel ad campaign gets sassy

BLOG: DAVE GUILFORD

A new Normal? Don't bet on it

GM recalls 82,620 Cadillac ATS sedans over sunroof issue

Subaru parent's operating profit jumps 70% on surging U.S. sales

Maserati's profits will recover with Levante SUV, Marchionne says

Spain fines GM, Ford, other automakers for anti-competitive practices

BMW drivers collect $1,000 to delay charging i3 in Calif. pilot

American Axle Q2 net grows 12%

Denso lifts profit forecast on weaker yen

FCA battles in court with Australia ex-CEO

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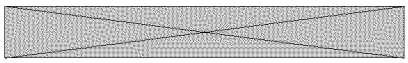

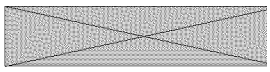

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/3/2015 12:57:52 PM
Subject: A.M. NEWSCAST: BMW, Audi, Daimler buy Nokia mapping unit | Hacking risk in Harman car radios? | Subaru parent puts suppliers on notice | High tech, high pressure on automakers | CAR gathering turns 50

August 3, 2015

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TOP STORY: German rivals buy Here

Harman car-radio risk? »

High tech, big pressure »

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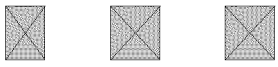

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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Nathan Knight[Nathan.Knight@porsche.us]; Kamal Charafeddine[kamal.charafeddine@porsche.de]
From: Ross Gatzke
Sent: Mon 8/3/2015 2:15:41 PM
Subject: Evap Groupings
Porsche Proposed Durability Groupings MY17_2015.07.31.xlsx

Hi, Jim

For MY 2017, we would like to request an exception to the evaporative/refuelling family grouping rules. Attached is a large spreadsheet showing our breakdown for MY 2017 evap families (in rows 49-70).

For the new Panameras (rows 63-65), we have two fuel tank sizes available. The evaporative systems for the two configurations are identical in every respect, except that for the larger tank we have determined that we will need a larger working capacity canister:

Tank	Canister Working Capacity
75 L	160 g
90 L	190 g

According to 86.1821-01(b), vehicles with identical evap systems can be in the same evap family if the canister capacities are within 10 g. However, we believe that it is reasonable to combine these vehicles in the same evap family despite the delta of 30 g, in light of the fact that we are using the smaller (worst-case) 160 g canisters in our DF determinations.

Let us know if this is acceptable. And let me know if you have any questions.

Ross Gatzke
Senior Engineer, Regulatory Affairs
Porsche Cars North America
Ross.Gatzke@porsche.us
Tel: 770-290-3516
Fax: 678-225-6580

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Khan, Farrukh
Sent: Mon 8/3/2015 7:15:47 PM
Subject: RE: Questions regarding CD-15-15

Hi Jim,

Can you please confirm with Rob French about the Ex. 4 - CBI

Thanks,

Farrukh

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, July 14, 2015 5:07 PM
To: Khan, Farrukh <KhanF@NRD.NISSAN-USA.COM>
Subject: RE: Questions regarding CD-15-15

Ex. 4 - CBI

2. The released guidance was edited down to release sooner to give manufacturers more lead time. More detailed follow up documents will follow. I expect those statements or something similar will be in the upcoming document.

3. I attached the new Calculator. It is still new so let us know if you find any errors with it.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Khan, Farrukh [mailto:KhanF@NRD.NISSAN-USA.COM]
Sent: Tuesday, July 14, 2015 11:07 AM
To: Snyder, Jim
Subject: Questions regarding CD-15-15

Hi, Jim,

I received following questions from Ex. 4 - CBI regarding the latest EPA guidance letter (CD-15-15),

Question #1

Ex. 4 - CBI

Question #2

Ex. 4 - CBI

Question #3

Ex. 4 - CBI

-----Original Message-----

From: Good.David@epamail.epa.gov [mailto:Good.David@epamail.epa.gov]

Sent: Saturday, May 08, 2010 7:37 PM

To: Darin_Johnson@AHM.Honda.com; peter_meier@ahm.honda.com; richard.thomas@vw.com; dennis.reineke@vw.com; thomas.hofmann@bmwna.com; wilhelm.hall@bmwna.com; deborah.a.zielesch@gm.com; adelarosa@ferrariusa.com; elarue1@ford.com; rbabcock@hatci.com; Khan, Farrukh; ogumah@ntcna.nissan-usa.com; vvarjabe@jaguar.com; drobertson@mazdausa.com; alex.travis@na.mitsubishi-motors.com; wlewis@porschecars.com; tony.dambrosi@tema.toyota.com; jennifer.jasperson@tema.toyota.com; balsip@suz.com; gbuffali@volvocars.com; cander44@volvocars.com; plennvi@volvocars.com; jcabaniss@aiam.org; r.maxwell@email.sae.org; remaxwell@comcast.net; gambrozaitis@autoalliance.org; rseal3@jaguar.com; kbalmer@landrover.com; jyarrow@astonmartin.com; kenboshart@msn.com; juliawinter@msn.com; jcusuman@ford.com; ddoku@maseratiusa.com; shkim@hatci.com; vdauria@volvocars.com; doug.devries@gm.com; john.healey@mbusa.com; dennis.pawlak@na.mitsubishi-motors.com; joan.whinihan@na.mitsubishi-motors.com; luis.hernandez@suz.com; ross.gatzke@porsche.us; bstott@ferrariusa.com; ml90@chrysler.com; andreas.roessler@daimler.com; jdf14@chrysler.com; asw9@chrysler.com; kkawag10@ford.com; kiriri@nano.tec.toyota.co.jp; dbarker@hatci.com; RMacleish@lotuscars.com; dlister@lotuscars.co.uk; sway@lotuscars.co.uk; SStewart@lotuscars.co.uk; woolery@subaru-research-mi.com; shinoharah@srd.subaru-fhi.co.jp; JRugge@subaru.com; gheiser@ford.com; David.Henry@roush.com; rocco.bellino@roush.com; shaun.roopnarine@mbusa.com; r-thomas.brunner@mbusa.com

Cc: Peavyhouse.Robert@epamail.epa.gov; Yang.Ching-Shih@epamail.epa.gov; Manners.Mary@epamail.epa.gov; Wehrly.Linc@epamail.epa.gov

Subject: EPA Fuel Economy - Two 2011 EPA FE Calculators Attached (which manufacturers might find helpful)

To manufacturers,

Attached is an Excel spreadsheet calculator which you might find helpful. It contains a wealth of information about rounding procedures, harmonic averaging, 5-cycle fuel economy label calculations, etc. according to the latest EPA regulations and guidance letters, (including the corrections & regulation changes in EPA's direct final rule published on Nov 25, 2009, ref 74 FR 61537).

Also attached is a spreadsheet which I use to calculate derived 5-cycle FE Label values with several tabs containing annual fuel costs tables. [Manufacturers' annual fuel cost calculations frequently have rounding errors (and other more significant errors) when I run the FE Guide tables for manufacturers.]

I think the macros, calculations and information in both spreadsheet are accurate, but if they are not accurate according to applicable regulations, the regulations take precedence.

If you find any mistakes, please contact Bob Peavyhouse and me (and we will correct the equations in the spreadsheets and resend to all).

Regards

(See attached file: 2011 EPA FE Calculator V01-w-no-CAFE-4-27-10.xls)

(See attached file: 5-cycle calcs-2008-2011-ann-fuel-cost-for

release.410.xls)

----- Forwarded by David Good/AA/USEPA/US on 05/08/2010 06:57 PM -----

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| From: |

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|Robert Peavyhouse/AA/USEPA/US

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|Mary Manners/AA/USEPA/US@EPA, Ching-Shih Yang/AA/USEPA/US@EPA, Roberts French/AA/USEPA/US@EPA, Karen Danzeisen/AA/USEPA/US@EPA |

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| Date: |

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|04/27/2010 02:47 PM |

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| Subject: |

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|2011 EPA FE Calculator V01 |

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CISD-LDVG,

This is a comprehensive EPA fuel economy calculator that I created with MINIMAL macros.
The only macro contained is a 1-line custom Excel function that performs ASTM rounding.
Because no macro needs to be run, all calculations update as soon as the data is entered.

It calculates the following:

1) 2011+ labels using all 7 sets of fuel economy calculations
2) Label Range
3) Label Annual Fuel Cost
4) Gas guzzler fuel economy

It also contains an explanation of why we use harmonic averaging and why we use ASTM rounding.

Dave is going to send it out to the manufacturers in an effort to reduce a lot of their calculation errors.
I thought you all might want a copy as well (especially the manufacturer reps).

Robert Peavyhouse

Compliance and Innovative Strategies Division

U.S. EPA - Office of Transportation and Air Quality

phone: (734) 214-4814

fax: (734) 214-4869

email: peavyhouse.robert@epa.gov

website: http://www.epa.gov/nvfel/

Regards,

Farrukh

To: Kabler, Lauren[Kabler.Lauren@epa.gov]
From: Kaul, Meetu
Sent: Mon 8/3/2015 8:09:00 PM
Subject: RE: Are you waiting for anything more from me in preparation for Pulse Ops?

Yup. Just turned 30 as well. And bought a house awhile back with his then girlfriend and now fiancée. He is seriously getting grown up – but still seems like a kid to me!

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kabler, Lauren
Sent: Monday, August 03, 2015 3:28 PM
To: Kaul, Meetu
Subject: RE: Are you waiting for anything more from me in preparation for Pulse Ops?

NO – I didn't know. Now he's all grown up!

Lauren V. Kabler

Special Counsel

Office of Civil Enforcement

U.S. EPA

Phone: 202.564.4052

From: Kaul, Meetu
Sent: Monday, August 03, 2015 2:38 PM
To: Kabler, Lauren
Subject: RE: Are you waiting for anything more from me in preparation for Pulse Ops?

Will do though I won't see him until Thursday. He is with Ross (and Andy Loll and Brent and Andrew Z from R9) doing inspections in Florida on defeat device stuff.

Did you know he got engaged a few weeks ago?

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kabler, Lauren
Sent: Monday, August 03, 2015 2:35 PM
To: Kaul, Meetu
Subject: RE: Are you waiting for anything more from me in preparation for Pulse Ops?

How's Tony? Tell him I miss working with him on this inspector stuff and then give him a noogie from me!

Lauren V. Kabler

Special Counsel

Office of Civil Enforcement

U.S. EPA

Phone: 202.564.4052

From: Kaul, Meetu
Sent: Monday, August 03, 2015 2:33 PM
To: Kabler, Lauren
Subject: RE: Are you waiting for anything more from me in preparation for Pulse Ops?

Don't say that! I really am actually working this week! (Vacation next)

Ex. 5, 7

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency

Office of Civil Enforcement - Air Enforcement Division
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1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kabler, Lauren
Sent: Monday, August 03, 2015 2:16 PM
To: Kaul, Meetu
Subject: RE: Are you waiting for anything more from me in preparation for Pulse Ops?

Aren't you on vacation otherwise known as "working in Denver?"

All good I think. Here's what I'm working on:

- finding a nearby hotel and making reservations (Sunday – Wednesday night);

Ex. 5, 7

You might want to confirm with Ross that he:

- reserved the van;

- figured out the powercord issue with the analyzers;

- is working on the safety and health plan.

Some other things…

Ex. 5, 7

Lauren V. Kabler

Special Counsel

Office of Civil Enforcement

U.S. EPA

Phone: 202.564.4052

From: Kaul, Meetu
Sent: Monday, August 03, 2015 1:43 PM
To: Kabler, Lauren
Subject: Are you waiting for anything more from me in preparation for Pulse Ops?

Or whatever the heck we are going to call it?

Just want to make sure I'm not slowing anything down.

Ms.Meetu Kaul, Attorney-Advisor

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United States Environmental Protection Agency
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Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/3/2015 8:30:54 PM
Subject: DAILY: July sales rise 5.3% | N.A. output will hit new records, forecaster says | Subaru's low-paid foreign workers | Storm disrupts Traverse City meetings

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Sales rise 5.3% on hardy crossover, truck volume

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JULY U.S. SALES

Sales rise 5.3% on hardy crossover, truck volume

U.S. light-vehicles sales -- fueled by healthy truck demand and gains at most major automakers -- rose 5.3 percent in July, helping the industry begin the second half of 2015 on a strong note. Ford Motor Co., Nissan Motor Co., Honda Motor Co.

N.A. output will hit new records to meet sales, export demands, forecaster says

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New test shows disparities in Ford F-150 crash protection

Nissan backs away from dealer ad attacking Trump for denouncing Mexican immigrants
Toyota holds price and aura of social responsibility.
Apple, Google at bay with Telenav navigation deal
TrueCar, Sonic settle trademark lawsuit
Ford F-150 aluminum repairs cost more than steel, IIHS says

BMW, Audi, Daimler will boost self-driving push with Nokia maps acquisition

U.S. widens probe of car radios that may be vulnerable to hacks

FCA recalls 284,153 Dodge Chargers for airbag flaw

Alfa Romeo completes prep work on new SUV

BLOG: RICHARD TRUETT

GM's fuel cell ideas take on new relevance

BLOG: **LINDSAY CHAPPELL**

Why Nissan wants you to know that size matters

BLOG: **DAVID SEDGWICK**

Why Conti has the inside track on automated maps

For GM, Clemson creates a party car

Buick trims Regal prices for 2016 to counter sedan slump

JCI exec says seating and interiors business is healthy

Subaru's non-automotive engine a big hit at CAR's event

Pacific trade talks end without deal; vehicle tariffs, rules remain a hurdle

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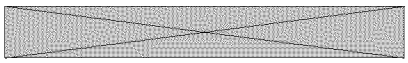

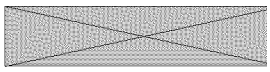

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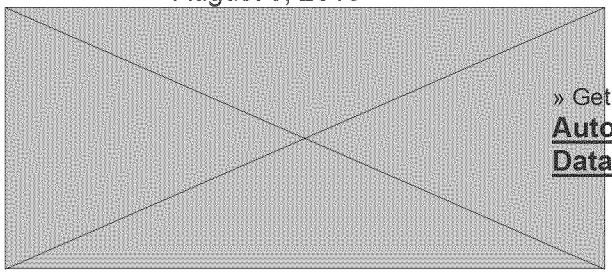
From: Automotive News
Sent: Mon 8/3/2015 10:07:59 PM
Subject: U.S. SALES REPORT: Nissan, Honda outpace the market | Retail drives GM | A hardy month for trucks, SAAR | Lexus nabs luxury title | Crossovers, higher F-150 spiffs propel Ford | July's secret sauce

August 3, 2015



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Nissan, Honda outpace the market on crossovers, sedans

American Honda Motor Co. and Nissan North America both showed solid sales growth in July, thanks to brisk sales of small crossovers, midsize sedans and luxury cars, data released today show.

Pickups, retail sales power GM's 6.4% gain

General Motors' U.S. July sales rose 6.4 percent on strong retail volume, including a 28 percent surge in deliveries of its profitable full-size pickups.

Lexus, with summer deals, grabs monthly luxury crown over Mercedes, BMW

Lexus scored its first monthly win this year in U.S. luxury-vehicle

Blogs

JESSE SNYDER

July's secret sauce?

[redacted] hardy crossover, truck volume

'Nothing bad happenir

Subaru of America set a new monthly sales record in July with sales of 50,517 vehicles, an increase of 11 percent.

The Ford F-series pickup achieved its first year-over-year sales increase since January as Ford Motor Co. posted an overall U.S. sales gain of 5 percent last month, to 222,014 vehicles, figures released today show.

WINNERS AND LOSERS

% change in sales among brands

	Winners	July		Winners	7 mos.		Losers	July		Losers	7 mos.
1	Mitsubishi	23.9%	1	Mitsubishi	24.8%	1	Smart	-67.4%	1	Smart	-32.2%
2	Jeep	22.9%	2	Land Rover	21.1%	2	Scion	-24.6%	2	Scion	-19.5%
3	Infiniti	22.2%	3	Jeep	21.0%	3	Maserati	-15.5%	3	Dodge	-15.8%
4	Lincoln	21.3%	4	Chrysler Division	19.1%	4	Fiat	-15.0%	4	Fiat	-13.0%
5	Audi	20.8%	5	Mini	18.3%	5	Dodge	-12.7%	5	Maserati	-4.8%

WINNERS AND LOSERS

	Winners	July
1	Mitsubishi	23.9%
2	Jeep	22.9%
3	Infiniti	22.2%
4	Lincoln	21.3%
5	Audi	20.8%

	Winners	7 mos.
1	Mitsubishi	24.8%
2	Land Rover	21.1%
3	Jeep	21.0%
4	Chrysler Division	19.1%
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1	Smart	-67.4%
2	Scion	-24.6%
3	Maserati	-15.5%
4	Fiat	-15.0%
5	Dodge	-12.7%

	Losers	7 mos.
1	Smart	-32.2%
2	Scion	-19.5%
3	Dodge	-15.8%
4	Fiat	-13.0%
5	Maserati	-4.8%

Top Selling Light Vehicles

		July		7 mos.
1	Ford F series	66,288	Ford F series	423,46
2	Chevrolet Silverado	56,380	Chevrolet Silverado	332,20
3	Toyota Camry	38,435	Toyota Camry	254,25
4	Ram pickup	36,019	Ram pickup	248,73
5	Honda Accord	34,496	Toyota Corolla	220,38
6	Nissan Altima	33,842	Nissan Altima	205,87
7	Honda CR-V	31,785	Honda CR-V	194,80
8	Honda Civic	31,139	Honda Accord	190,24
9	Toyota Corolla	30,249	Honda Civic	189,44
10	Ford Escape	29,253	Ford Fusion	178,26

Top Selling Cars

		July		7 mos.
1	Toyota Camry	38,435	Toyota Camry	254,25
2	Honda Accord	34,496	Toyota Corolla	220,38
3	Nissan Altima	33,842	Nissan Altima	205,87
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6	Ford Fusion	25,105	Ford Fusion	178,26

7	Hyundai Sonata		Hyundai Elantra		
8	Hyundai Elantra	22,135	Chevrolet Cruze	149,27	
9	Chevrolet Cruze	21,339	Ford Focus	134,10	
10	Nissan Sentra	18,511	Nissan Sentra	124,41	

Top Selling Light Trucks

		July		7 mos.
1	Ford F series	66,288	Ford F series	423,46
2	Chevrolet Silverado	56,380	Chevrolet Silverado	332,20
3	Ram pickup	36,019	Ram pickup	248,73
4	Honda CR-V	31,785	Honda CR-V	194,80
5	Ford Escape	29,253	Ford Escape	175,66
6	Toyota RAV4	26,709	Toyota RAV4	170,28
7	Nissan Rogue	25,081	Chevrolet Equinox	167,29
8	Ford Explorer	23,381	Nissan Rogue	160,47
9	Chevrolet Equinox	21,609	Ford Explorer	145,78
10	GMC Sierra	19,808	Jeep Cherokee	122,12

Table sorted by year-to-date sales

	July 2015	July 2014	% change	7 mos. 2015	7 mos. 2014	% change
Buick	20,791	17,683	17.6%	127,105	131,155	-3.1%
Cadillac	14,154	15,241	-7.1%	95,053	97,358	-2.4%
Chevrolet	188,790	175,155	7.8%	1,242,409	1,203,063	3.3%
GMC	48,777	48,081	1.4%	313,490	280,452	11.8%
General Motors	**272,512**	**256,160**	**6.4%**	**1,778,057**	**1,712,028**	**3.9%**
Ford division	212,478	203,604	4.4%	1,453,685	1,424,439	2.1%
Lincoln	9,536	7,863	21.3%	56,648	52,385	8.1%
Ford Motor Co.	**222,014**	**211,467**	**5.0%**	**1,510,333**	**1,476,824**	**2.3%**
Lexus	29,816	27,333	9.1%	188,664	166,022	13.6%
Scion	3,865	5,127	-24.6%	28,796	35,763	-19.5%
Toyota Division	183,500	183,342	0.1%	1,231,161	1,179,624	4.4%
Toyota/Scion	*187,365*	*188,469*	-0.6%	*1,259,957*	*1,215,387*	3.7%
Toyota Motor Sales	**217,181**	**215,802**	**0.6%**	**1,448,621**	**1,381,409**	**4.9%**
Alfa Romeo	48	-	-	368	-	-
Chrysler Division	25,722	23,455	9.7%	195,970	164,523	19.1%
Dodge	37,649	43,118	-12.7%	294,791	350,042	-15.8%
Ram	38,157	37,699	1.2%	269,103	252,056	6.8%
Fiat	3,235	3,807	-15.0%	25,033	28,779	-13.0%
Jeep	73,216	59,588	22.9%	474,905	392,390	21.0%
FCA US	***178,027***	***167,667***	**6.2%**	***1,260,170***	***1,187,790***	**6.1%**

Ferrari*						
Maserati	957	1,132	-15.5%	6,261	6,574	-4.8%
Fiat Chrysler Automobiles**	**179,161**	**168,975**	**6.0%**	**1,267,670**	**1,195,594**	**6.0%**
Acura	14,915	12,480	19.5%	102,002	90,431	12.8%
Honda Division	131,409	123,428	6.5%	797,323	784,913	1.6%
American Honda Motor Co.	**146,324**	**135,908**	**7.7%**	**899,325**	**875,344**	**2.7%**
Infiniti	10,433	8,538	22.2%	74,713	67,879	10.1%
Nissan Division	120,439	112,914	6.7%	792,642	758,050	4.6%
Nissan North America	**130,872**	**121,452**	**7.8%**	**867,355**	**825,929**	**5.0%**
Hyundai division	71,013	67,011	6.0%	442,163	431,445	2.5%
Kia	56,311	52,309	7.7%	367,263	349,722	5.0%
Hyundai-Kia	**127,324**	**119,320**	**6.7%**	**809,426**	**781,167**	**3.6%**
Audi	17,654	14,616	20.8%	111,269	98,965	12.4%
Bentley	208	201	3.5%	1,457	1,509	-3.4%
Lamborghini*	63	61	3.3%	441	427	3.3%
Porsche	4,730	4,300	10.0%	29,868	27,219	9.7%
VW division	31,300	30,553	2.4%	205,742	209,697	-1.9%
VW Group Of America	**53,955**	**49,731**	**8.5%**	**348,777**	**337,817**	**3.2%**
Subaru	**50,517**	**45,714**	**10.5%**	**322,935**	**283,722**	**13.8%**
BMW division	26,970	26,409	2.1%	195,593	183,791	6.4%
Mini	5,191	5,811	-10.7%	35,451	29,963	18.3%
Rolls-Royce*	95	93	2.2%	665	646	2.9%
BMW Group	**32,256**	**32,313**	**-0.2%**	**231,709**	**214,400**	**8.1%**
Mercedes-Benz	29,689	29,406	1.0%	208,193	192,513	8.1%
Smart USA	441	1,351	-67.4%	4,065	5,998	-32.2%
Daimler AG	**30,130**	**30,757**	**-2.0%**	**212,258**	**198,511**	**6.9%**
Mazda	**27,157**	**29,235**	**-7.1%**	**186,153**	**185,665**	**0.3%**
Mitsubishi	**7,868**	**6,349**	**23.9%**	**57,412**	**46,021**	**24.8%**
Jaguar	1,242	1,187	4.6%	9,078	9,504	-4.5%
Land Rover	5,011	4,643	7.9%	37,323	30,829	21.1%
Jaguar Land Rover N.A.	**6,253**	**5,830**	**7.3%**	**46,401**	**40,333**	**15.0%**
Volvo Cars N.A.	**5,619**	**4,894**	**14.8%**	**34,985**	**34,224**	**2.2%**
Tesla*	**1,700**	**1,500**	**13.3%**	**11,900**	**10,500**	**13.3%**
Other***	**98**	**95**	**3.2%**	**682**	**661**	**3.2%**
U.S. LIGHT VEHICLE	**1,510,044**	**1,435,502**	**5.3%**	**10,033,999**	**9,600,149**	**4.5%**

Table sorted by year-to-date sales

*Estimate

**Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.

***Includes estimates for Aston Martin, Ferrari and Lotus

	July 2015	July 2014	% change
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Chrysler Division	25,722	23,455	9.7%

Dodge			
Ram	38,157	37,699	1.2%
Fiat	3,235	3,807	-15.0%
Jeep	73,216	59,588	22.9%
FCA US	***178,027***	***167,667***	**6.2%**
Ferrari*	177	176	0.6%
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Fiat Chrysler Automobiles**	**179,161**	**168,975**	**6.0%**
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Bentley	208	201	3.5%
Lamborghini*	63	61	3.3%
Porsche	4,730	4,300	10.0%
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*****Includes estimates for Aston Martin, Ferrari and Lotus**

Highlights

Mfgr. highest volume - July	**GM**	272,512	**Mfgr. highest volume - 7 mos.**	**GM**	1,778,057
Mfgr. gained the most volume - July	**GM**	16,352	**Mfgr. gained the most volume - 7 mos.**	**Fiat Chrysler**	72,076
Mfgr. lost the most volume -	**Mazda**	(2,078)	**Mfgr. lost the most volume - 7**		N/A

	July			mos.	
Mfgr. highest % increase - July	**Mitsubishi**	23.9%	**Mfgr. highest % increase - 7 mos.**	**Mitsubishi**	24.8%
Mfgr. biggest % drop - July	**Mazda**	-7.1%	**Mfgr. biggest % drop - 7 mos.**		N/A
Brand highest volume - July	**Ford**	212,478	**Brand highest volume - 7 mos.**	**Ford**	1,453,68
Brand gained the most volume - July	**Chevrolet**	13,635	**Brand gained the most volume - 7 mos.**	**Jeep**	82,515
Brand lost the most volume - July	**Dodge**	(5,469)	**Brand lost the most volume - 7 mos.**	**Dodge**	(55,251)
Brand highest % increase - July	**Mitsubishi**	23.9%	**Brand highest % increase - 7 mos.**	**Mitsubishi**	24.8%
Brand biggest % drop - July	**Smart**	-67.4%	**Brand biggest % drop - 7 mos.**	**Smart**	-32.2%

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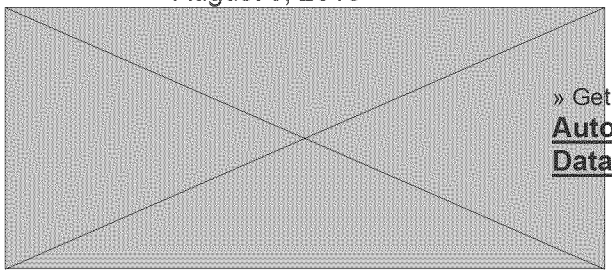
August 3, 2015



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Nissan, Honda outpace the market on crossovers, sedans

American Honda Motor Co. and Nissan North America both showed solid sales growth in July, thanks to brisk sales of small crossovers, midsize sedans and luxury cars, data released today show.

Pickups, retail sales power GM's 6.4% gain

General Motors' U.S. July sales rose 6.4 percent on strong retail volume, including a 28 percent surge in deliveries of its profitable full-size pickups.

Lexus, with summer deals, grabs monthly luxury crown over Mercedes, BMW

Lexus scored its first monthly win this year in U.S. luxury-vehicle

Blogs

JESSE SNYDER

July's secret sauce?

[redacted] hardy crossover, truck [redacted] volume

'Nothing bad happenir

Subaru of America set a new monthly sales record in July with sales of 50,517 vehicles, an increase of 11 percent.

The Ford F-series pickup achieved its first year-over-year sales increase since January as Ford Motor Co. posted an overall U.S. sales gain of 5 percent last month, to 222,014 vehicles, figures released today show.

WINNERS AND LOSERS

% change in sales among brands

	Winners	July		Winners	7 mos.		Losers	July		Losers	7 mos.
1	Mitsubishi	23.9%	1	Mitsubishi	24.8%	1	Smart	-67.4%	1	Smart	-32.2%
2	Jeep	22.9%	2	Land Rover	21.1%	2	Scion	-24.6%	2	Scion	-19.5%
3	Infiniti	22.2%	3	Jeep	21.0%	3	Maserati	-15.5%	3	Dodge	-15.8%
4	Lincoln	21.3%	4	Chrysler Division	19.1%	4	Fiat	-15.0%	4	Fiat	-13.0%
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Lamborghini*	63	61	3.3%	441	427	3.3%
Porsche	4,730	4,300	10.0%	29,868	27,219	9.7%
VW division	31,300	30,553	2.4%	205,742	209,697	-1.9%
VW Group Of America	**53,955**	**49,731**	**8.5%**	**348,777**	**337,817**	**3.2%**
Subaru	**50,517**	**45,714**	**10.5%**	**322,935**	**283,722**	**13.8%**
BMW division	26,970	26,409	2.1%	195,593	183,791	6.4%
Mini	5,191	5,811	-10.7%	35,451	29,963	18.3%
Rolls-Royce*	95	93	2.2%	665	646	2.9%
BMW Group	**32,256**	**32,313**	**-0.2%**	**231,709**	**214,400**	**8.1%**
Mercedes-Benz	29,689	29,406	1.0%	208,193	192,513	8.1%
Smart USA	441	1,351	-67.4%	4,065	5,998	-32.2%
Daimler AG	**30,130**	**30,757**	**-2.0%**	**212,258**	**198,511**	**6.9%**
Mazda	**27,157**	**29,235**	**-7.1%**	**186,153**	**185,665**	**0.3%**
Mitsubishi	**7,868**	**6,349**	**23.9%**	**57,412**	**46,021**	**24.8%**
Jaguar	1,242	1,187	4.6%	9,078	9,504	-4.5%
Land Rover	5,011	4,643	7.9%	37,323	30,829	21.1%
Jaguar Land Rover N.A.	**6,253**	**5,830**	**7.3%**	**46,401**	**40,333**	**15.0%**
Volvo Cars N.A.	**5,619**	**4,894**	**14.8%**	**34,985**	**34,224**	**2.2%**
Tesla*	**1,700**	**1,500**	**13.3%**	**11,900**	**10,500**	**13.3%**
Other***	**98**	**95**	**3.2%**	**682**	**661**	**3.2%**
U.S. LIGHT VEHICLE	**1,510,044**	**1,435,502**	**5.3%**	**10,033,999**	**9,600,149**	**4.5%**

Table sorted by year-to-date sales

*Estimate

**Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.

***Includes estimates for Aston Martin, Ferrari and Lotus

	July 2015	July 2014	% change
Buick	20,791	17,683	17.6%
Cadillac	14,154	15,241	-7.1%
Chevrolet	188,790	175,155	7.8%
GMC	48,777	48,081	1.4%
General Motors	**272,512**	**256,160**	**6.4%**
Ford division	212,478	203,604	4.4%
Lincoln	9,536	7,863	21.3%
Ford Motor Co.	**222,014**	**211,467**	**5.0%**
Lexus	29,816	27,333	9.1%
Scion	3,865	5,127	-24.6%
Toyota Division	183,500	183,342	0.1%
Toyota/Scion	*187,365*	*188,469*	-0.6%
Toyota Motor Sales	**217,181**	**215,802**	**0.6%**
Alfa Romeo	48	-	-
Chrysler Division	25,722	23,455	9.7%

Dodge			
Ram	38,157	37,699	1.2%
Fiat	3,235	3,807	-15.0%
Jeep	73,216	59,588	22.9%
FCA US	***178,027***	***167,667***	**6.2%**
Ferrari*	177	176	0.6%
Maserati	957	1,132	-15.5%
Fiat Chrysler Automobiles**	**179,161**	**168,975**	**6.0%**
Acura	14,915	12,480	19.5%
Honda Division	131,409	123,428	6.5%
American Honda Motor Co.	**146,324**	**135,908**	**7.7%**
Infiniti	10,433	8,538	22.2%
Nissan Division	120,439	112,914	6.7%
Nissan North America	**130,872**	**121,452**	**7.8%**
Hyundai division	71,013	67,011	6.0%
Kia	56,311	52,309	7.7%
Hyundai-Kia	**127,324**	**119,320**	**6.7%**
Audi	17,654	14,616	20.8%
Bentley	208	201	3.5%
Lamborghini*	63	61	3.3%
Porsche	4,730	4,300	10.0%
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***Estimate**
****Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.**
*****Includes estimates for Aston Martin, Ferrari and Lotus**

Highlights

Mfgr. highest volume - July	**GM**	272,512	**Mfgr. highest volume - 7 mos.**	**GM**	1,778,057
Mfgr. gained the most volume - July	**GM**	16,352	**Mfgr. gained the most volume - 7 mos.**	**Fiat Chrysler**	72,076
Mfgr. lost the most volume -	**Mazda**	(2,078)	**Mfgr. lost the most volume - 7**		N/A

July			**mos.**		
Mfgr. highest % increase - July	**Mitsubishi**	23.9%	**Mfgr. highest % increase - 7 mos.**	**Mitsubishi**	24.8%
Mfgr. biggest % drop - July	**Mazda**	-7.1%	**Mfgr. biggest % drop - 7 mos.**		N/A
Brand highest volume - July	**Ford**	212,478	**Brand highest volume - 7 mos.**	**Ford**	1,453,68
Brand gained the most volume - July	**Chevrolet**	13,635	**Brand gained the most volume - 7 mos.**	**Jeep**	82,515
Brand lost the most volume - July	**Dodge**	(5,469)	**Brand lost the most volume - 7 mos.**	**Dodge**	(55,251)
Brand highest % increase - July	**Mitsubishi**	23.9%	**Brand highest % increase - 7 mos.**	**Mitsubishi**	24.8%
Brand biggest % drop - July	**Smart**	-67.4%	**Brand biggest % drop - 7 mos.**	**Smart**	-32.2%

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To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Tue 8/4/2015 12:49:05 PM
Subject: Telephone call

Hi Jim.

If you have a few minutes we have a couple of test rated questions. Could you call or tell me when you have about 15 minutes?
Thank you
Len

Sent from my iPhone

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 8/4/2015 8:29:00 PM
Subject: DAILY: GM to invest $877M in Flint plant | EPA official shoots down CAFE speculation | Toyota profits surge | Why map software is the new oil | Mel Farr dead at 70

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Apple, Google at bay with Telenav

BLOG: GABE NELSON

Mel Farr, Detroit pro football player, dies at 70

Mel Farr, the former Detroit Lions running back who became owner of the nation's largest black-owned dealership group, has died at the age of 70.

Toyota profit jumps 10% in quarter as yen cuts currency gains

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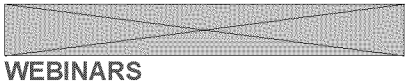

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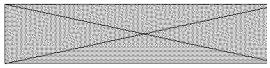

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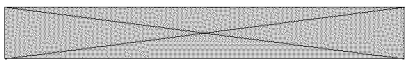

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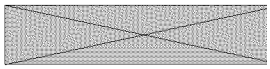

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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Schuetze, Michael (N/EA-521)[Michael.Schuetze@audi.de]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Rodgers, William (EEO)
Sent: Wed 8/5/2015 12:15:16 PM
Subject: Meeting request

Hello Jim,

Myself and Michael Schuetze of Audi would like to meet with you at your offices to discuss Ex. 4 - CBI for upcoming certification of the Ex. 4 - CBI We plan to be at EPA late morning August 17th and all day August 19th supporting Ex. 4 - CBI confirmatory testing so either day would work good for us. Please let us know if you are available these days and a place and time to meet.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 8/5/2015 1:03:55 PM
Subject: A.M. NEWSCAST: Harman CEO: Hacking risk 'unique to Chrysler' | More power for VW Jetta | 54.5 MPG not done deal | A Lexus without wheels | NADA: 17M sales pace unsustainable

August 5, 2015

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To: Paula Doan[PDoan@AutoBeatDaily.com]
From: Paula Doan
Sent: Wed 8/5/2015 1:35:21 PM
Subject: Are you ready for tonight? The AutoBeat Group is! And what a party it will be....
ABG_WednesdayNIght_party.pdf

Good morning!

Despite some CRAZY circumstances, this has been a superior conference week. Cudos to the CAR Group for dealing with any conference organizer's worst nightmares.

AutoBeat is ready to provide an evening of fun you won't soon forget! HUGE thanks to our awesome sponsors:

Infor
LMC Automotive
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Germany or the US – who REALLY has the best beer? You'll be deciding that tonight along with great food competitions from both countries. There are pontoon boats, classic cars, a funky and fun Motown-inspired band (plan on dancing – you won't be able to help yourself), and lots of surprises.

All kicks off at 7:30 through midnight at the Riverwalk Grill and Taproom, 106 Ames Street, Elk Rapids.

Transportation outside the resort starts at 7:15 and will loop all night. For those who joined us Monday, we know there were some major delays as a result of traffic lights out, downed wires and some random trees blocking roads but we're good to go for tonight.

If you plan on driving, just turn right out of the resort and keep going until you see Elk Lake on your right and the Riverwalk right on the corner. It's just under a 10 minute trip. But why drive when we can take care of that for you?

Know EVERYONE is welcome (no minors – sorry). Dress attire is anything goes. Shorts and flip flops or your prettiest party dress. Guys: Lose the suits and have some fun.

Shoot me a text or call the cell with any questions. Our team will be there most of the day getting everything ready.

Hope to see you tonight. The invitation is attached.

Best,
Paula
--
Paula Doan
AutoBeat Group
cell: 313-675-0008
office: 313-908-7165
Paula@autobeatgroup.com

autobeat group

Germany or the U.S... Who *REALLY* has the best beer?

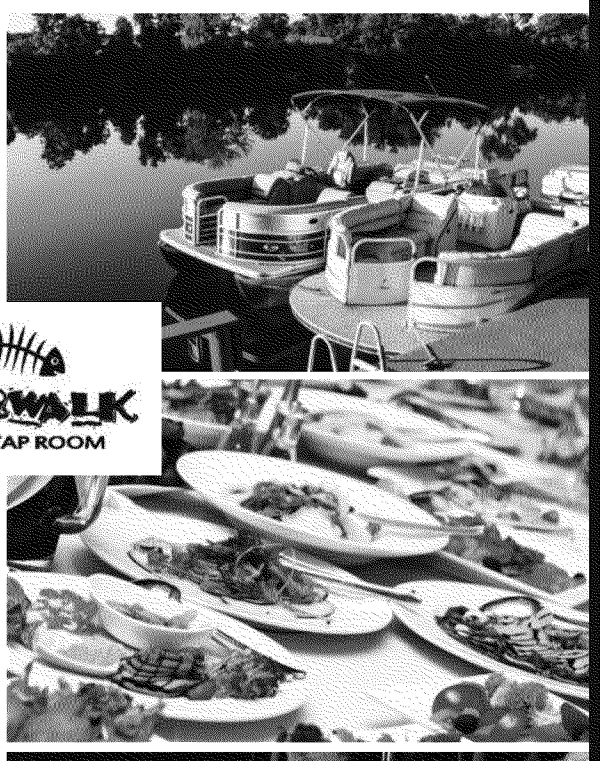
THIS IS THE PARTY EVERYONE IS *ALREADY* TALKING ABOUT!

What better way to spend your last night in Traverse City than right on the water at a fabulous venue with the industry's movers and shakers!

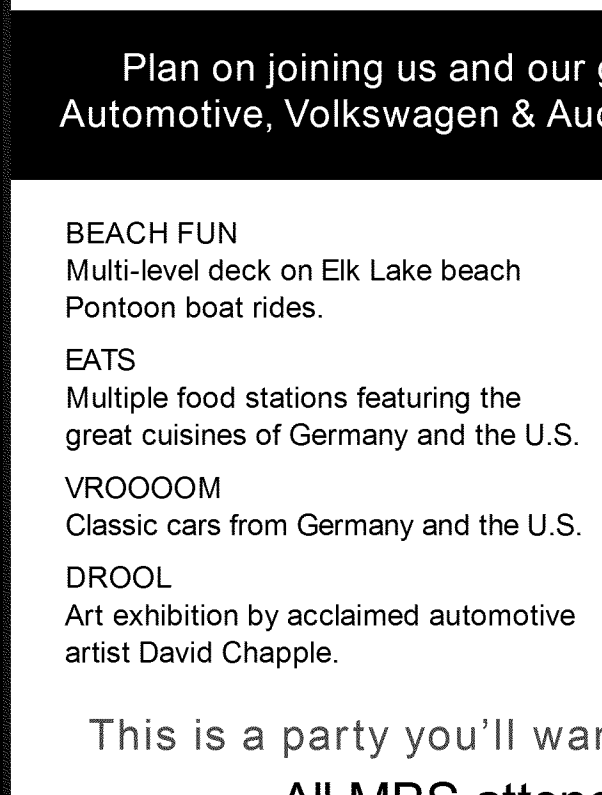
TIME
Wednesday
August 5th
7:30 pm to midnight

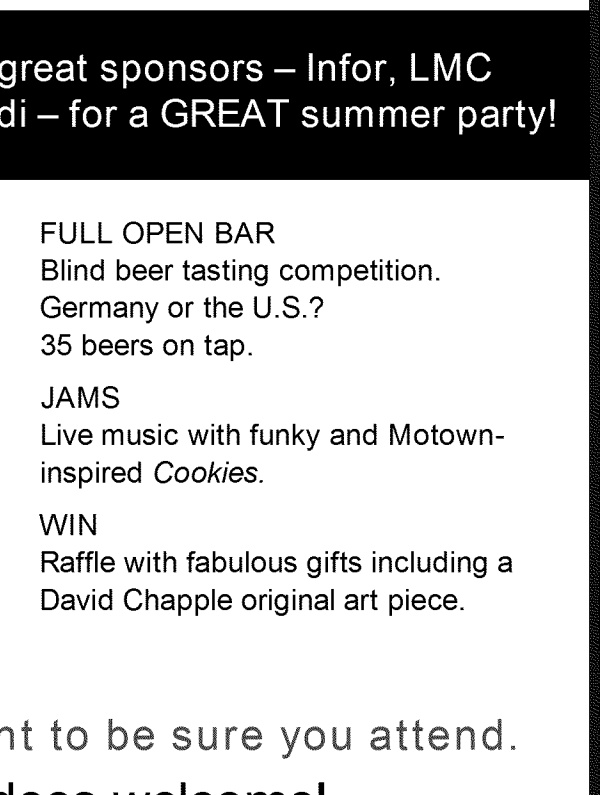
LOCATION
Riverwalk Grill and Taproom
106 Ames St., Elk Rapids (just minutes from the Grand Traverse Resort)

TRANSPORTATION
Continuous looping transportation from the Grand Traverse Resort
(look for the black party buses)



RIVERWALK GRILL & TAP ROOM





Plan on joining us and our great sponsors – Infor, LMC Automotive, Volkswagen & Audi – for a GREAT summer party!

BEACH FUN
Multi-level deck on Elk Lake beach
Pontoon boat rides.

EATS
Multiple food stations featuring the great cuisines of Germany and the U.S.

VROOOOM
Classic cars from Germany and the U.S.

DROOL
Art exhibition by acclaimed automotive artist David Chapple.

FULL OPEN BAR
Blind beer tasting competition.
Germany or the U.S.?
35 beers on tap.

JAMS
Live music with funky and Motown-inspired *Cookies.*

WIN
Raffle with fabulous gifts including a David Chapple original art piece.

This is a party you'll want to be sure you attend.

All MBS attendees welcome!
See you in Traverse City!

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For more information: Paula Doan paula@autobeatgroup.com or 313-675.0008

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To: [Ex. 7 @vw.com]
From: Snyder, Jim
Sent: Wed 8/5/2015 6:49:46 PM
Subject: PHEV calculation spreadsheet
PHEV Calculator v18 with sample data.xlsm

Ex. 7 please pass this on to Ex. 7 whoever is doing the numbers.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: French, Roberts
Sent: Wednesday, August 05, 2015 2:01 PM
To: Snyder, Jim
Subject: RE: Questions regarding CD-15-15

There will be a new version in the next month or two that has a few more things automated and will add some new CAFÉ calculations that came about as a result of new legislation from last December (for MY16 CAFÉ).

Please let users know they should contact me with any questions.

Thanks,

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

The calculated values for these methods are shown in the calculation worksheets in rows 25-30.

		For model years up to and including 2019	
		Is it a dual fuel vehicle under 49 U.S.C. 32905/32906 and 49 CFR 538.5, i.e., does it meet minimum driving range requirements specified by DOT?	
		YES	**NO**
Does it exhibit blended operation during charge-depleting UDDS or HFET test procedures?	**YES**	A	C
	NO	B	

Description of CAFE methodologies. The methodology for GHG calculations is always Method C.	
A	CAFE = 50/50 weighting of electricity and gasoline efficiencies. Electricity efficiency is calculated using equivalent all-electric range and recharge event electricity, using DOE Petroleum Equivalence Factor (includes 0.15 adjustment)
B	CAFE = 50/50 weighting of electricity and gasoline = 50/50 weighting of charge-depleting and charge-sustaining modes, using DOE Petroleum Equivalence Factor (includes 0.15 adjustment)
C	Utility Factor weighting of charge-depleting and charge-sustaining modes. Electricity is counted only on an energy equivalent basis (no use of DOE Petroleum Equivalence Factor or 0.15 adjustment)
D	Utility Factor weighting of charge-depleting and charge-sustaining modes. Electricity is counted only on an energy equivalent basis (with DOE Petroleum Equivalence Factor including 0.15 adjustment)

d use. The calculated values

For 2020 and later model years
D

y for GHG calculations is	Examples
ciencies. Electricity efficiency is arge event electricity, using DOE ent)	None
0/50 weighting of charge-depleting quivalence Factor (includes 0.15	Chevrolet Volt Ford Fusion/C-Max Honda Accord Porsche Spyder
e-sustaining modes. Electricity is DOE Petroleum Equivalence Factor	Toyota Prius Porsche Panamera
e-sustaining modes. Electricity is Petroleum Equivalence Factor	None (applies only after 2019 model year)

Enter data ONLY in GREEN cells

Enter Vehicle Information Here:

Model Year:	2014
Vehicle Category:	enger Vehicle (PV)
Manufacturer Name:	ABC Auto
Model Name:	Zoom
Additional Descriptors (e.g., Eco Mode, Config No.):	Blended PHEV

CAFE, GHG, AND LABEL CALCULATIONS

CAFE & GHG CALCULATIONS	Units
Fraction of Transition Cycle Allocated to Charge-Depleting (Zn)	
Charge-Depleting Range (Rcda)	miles
Equivalent All Electric Range, Unadjusted (calculated per 86.1866-12(b))	miles
Charge-Depleting DC Energy Consumed	W-hours
Charge-Depleting AC Electricty Consumption Rate	AC W-hrs/mi
Charge-Depleting Incentivized Fuel Economy (uses DOE Petroleum Equiv Factor)	MPGe
Charge-Depleting gasoline CREE, utilitized	g/mi
Fleet Utility Factor	UF
Charge-Depleting Fuel Consumption Rate, utilitized	gal-e/mi
Charge-Depleting CO2 Emissions	g/mi

CAFE & GHG VALUES	
A. Composite CD/CS Incentivized CAFE (for dual fuel "blended" PHEVs)	MPGe
B. Composite CD/CS Incentivized CAFE (for dual fuel "non-blended" PHEVs)	MPGe
C. Composite CD/CS CAFE (if NOT a CAFE dual fuel vehicle)	MPGe
D. Composite CD/CS CAFE (for after model year 2019)	MPGe
E. Composite CD/CS CREE (does not include upstream emissions)	g/mi
F. Composite CD/CS CREE (includes net upstream emissions per 600.113-12(n))	g/mi

LABEL CALCULATIONS	
Charge-Depleting Cost per Mile - Electricity	$/mi
Charge-Depleting Cost per Mile - Gasoline	$/mi
Charge-Depleting Cost per Mile - Total Electricity + Gasoline	$/mi
Charge-Sustaining Cost per Mile	$/mi
MDIUF based on Rcda	mdiuf
MDIUF (for composite fractional UF calculations)	mdiuf
Composite CD/CS Cost per Mile	$/mi

Charge-Depleting Gasoline Consumption	gals
Charge-sustaining Driving Range	miles
Charge-Depleting CO2	g/mi

LABEL VALUES	
Charge-Depleting Range (Rcda)	miles
All-Electric Range (AER)	miles
Total Driving Range	miles
Charge-Depleting Fuel Economy (MPGe)	mpge
Charge-Depleting Electricity Consumption Rate	kWh/100mi
Charge-Depleting Gasoline Consumption Rate	gal/100mi
Charge-Sustaining Fuel Economy	mpg
Charge-Sustaining Fuel Consumption Rate	gal/100mi
Annual Fuel Cost	$/year
5-Year Save/Spend Value (negative value = SPEND)	$/5-years
Composite CD/CS CO2 (fractional UF calculation)	g/mi
Composite CD/CS Fuel Economy (fractional UF calculation)	mpge

HOV VALUES (used for specific state requirements)	
MDIUF based on unadjusted Rcda	mdiuf
Charge-Depleting Fuel Economy	mpge
Composite CD/CS Fuel Economy (lumped UF method)	mpge
MDIUF (for composite fractional UF calculation)	mdiuf
Composite CD/CS Fuel Economy (fractional UF method)	mpge

Enter data ONLY in GREEN cells

2014
Passenger Vehicle (PV)
ABC Auto
Zoom
Blended PHEV

Enter Test Information Here:	
Charge-Depleting City:	
Charge-Depleting Highway:	
~~DELETE; COULD BE 5-CYCLE~~	~~Charge-Sustaining City:~~
~~DELETE; COULD BE 5-CYCLE~~	~~Charge-Sustaining Highway:~~

ENTER DATA HERE: CHARGE-SUSTAINING AND C

City	Highway	Combined
0.8489	0.1531	
21.05	22.04	21.50
21.05	20.74	
-5614	-5057	
313.35	307.20	310.582
261.8	267.1	
7.7	19.9	
0.5633	0.3453	
0.0059	0.0045	
0.0	10.3	4.645

CHARGE-SUSTAINING INPUTS: MPG, CREE, CO2
Fuel Economy, Unadjusted
Fuel Economy, Adjusted 5-Cycle or Derived 5-Cycle
CREE, Unadjusted
CO2, Unadjusted
CO2, Adjusted 5-Cycle or Derived 5-Cycle

ADDITIONAL INPUTS FOR LABEL AND CREE CALCULATIO		
Gasoline cost	$/gallon	$ 3.75
Electricity cost	$/kW-hour	$ 0.12
Average vehicle MPG	MPG	23
Average vehicle 5-year cost	$	$ 11,500

City	Highway	Combined
62.6785	**83.8243**	**70.7048**
62.6785	**84.6565**	**70.9696**
54.9676	**56.9392**	**55.8**
CALCULATION UNDER DEVELOPMENT		
117	**136**	**126**
CALCULATION UNDER DEVELOPMENT		

CITY (UDDS) CHARGE-DEPLETING INPUTS			
Which cycle/phase number is the transition cycle?			
Enter the Total Recharge Energy (AC Watt-Hours):			
Enter the unadjusted all-electric range, if any (miles):			
Cycle/Phase No.	**Cycle/Phase Target Distance**	**Cycle/Phase Measured Distance**	**Integrated Amp-Hours Electricity Used**
No.	*miles*	*miles*	*Amp-hours*
1	7.45	7.367	-5.037
2	7.45	7.422	-10.081
3	7.45	7.373	-14.520
4	7.45	7.370	-14.298
5	7.45	7.400	-15.466
6	7.45		
7	7.45		

City	Highway	Combined
		15.08
$ 0.057	$ 0.053	
$ -	$ 0.006	
$ 0.057	$ 0.059	
$ 0.15	$ 0.12	
0.369	0.381	0.374
0.3855	0.4820	
$ 0.12	$ 0.09	$ 0.11

0	0.02560	0.01152
376.50	485.17	425.40170
0.000	14.739	6.632

City	Highway	Combined
14.78	15.44	**15.0**
0.00	0.00	**0.0**
		440
75.538	68.158	**72.0**
47.4	44.0	**46.0**
0.0000	0.1658	**0.1**
25.1	32.4	**28.0**
4.0	3.1	**3.6**
		$ 1,600.00
		$ 3,500.00
225.766	175.974	**203**
32.96	40.37	**36**

Enter the unadjusted all-electric range, if any (miles):

City	Highway	Combined
0.4726	0.4871	
107.57	97.31	
52.0623	65.7776	**57.5**
0.49141	0.59549	
51.39136	64.52590	**56.6**

8	7.45		
9	7.45		
10	7.45		
11	7.45		
12	7.45		
13	7.45		
14	7.45		
15	7.45		
16	7.45		
17	7.45		
18	7.45		
19	7.45		
20	7.45		

HIGHWAY (HFET) CHARGE-DEPLETING INPUTS			
ne transition cycle?			
y (AC Watt-Hours):			
if any (miles):			
No.	**Distance**	**Distance**	**Used**
No.	*miles*	*miles*	*Amp-hours*
1	10.3	10.239	-6.120
2	10.3	10.238	-12.735
3	10.3	10.221	-13.774
4	10.3	10.234	-13.835
5	10.3		
6	10.3		
7	10.3		
8	10.3		
9	10.3		
10	10.3		
11	10.3		
12	10.3		
13	10.3		
14	10.3		
15	10.3		
16	10.3		
17	10.3		
18	10.3		
19	10.3		
20	10.3		

Values for fueleconomy

Charge Sustaining Oper
City FE (Guide) Conventional Fuel
25

Test Date	Test Number/Identifier
6/26/2014	ABC12345678
6/27/2014	DEF78945612

NING AND CHARGE DEPLETING

		City	Highway
	mpg	35.6	50.3
	mpg	25.1	32.4
	g/mi	249.6	176.7
	g/mi	248.5	175.1
	g/mi	354.1	274.3

E CALCULATIONS

Fuel tank size (U.S. gallons)	15.00
Vehicle footprint (square feet)	

Which cycle/phase number is the transition cycle?	3
Enter the Total Recharge Energy (AC Watt-Hours):	7000
ter the unadjusted all-electric range, if any (miles):	

Average Cycle Voltage	Fuel Economy	CO2	CREE
Volts	*MPG*	*g/mi*	*g/mi*
380.40			
361.70			
348.90	160.50	55.37	56.37
344.75	41.30	215.18	216.18
343.40	32.40	274.29	275.29

UDDS CALCULATIONS

Cycle/Phase No.	Gasoline Consumed	CO2
No.	*gal*	*grams*
1	0.0000	0.0000
2	0.0000	0.0000
3	0.0459	408.2483
4	0.1785	1585.8884
5	0.2284	2029.7469
6		
7		

8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

			3
			6800
Voltage	**Economy**	**CO2**	**CREE**
Volts	*MPG*	*g/mi*	*g/mi*
378.10	399.90	22.22	23.22
356.85			
347.95	55.30	160.71	161.71
347.45	50.70	175.29	176.29

HFET CALCULATIONS		
No.	**Consumed**	**CO2**
No.	*gal*	*grams*
1	0.0256	227.5419
2	0.0000	0.0000
3	0.1848	1642.5683
4	0.2019	1793.8769
5		
6		
7		
8		
9		
10		
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13		
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15		
16		
17		
18		
19		
20		

ation
ge Sustaining Operation

Hwy FE (Guide) - Conventional Fuel	Comb FE (Guide) - Conventional Fuel	City Unadj FE - Conventional Fuel	Hwy Unadj FE - Conventional Fuel	Comb Unadj FE - Conventional Fuel	City Unrd Adj FE - Conventional Fuel	Hwy Unrd Adj FE - Conventional Fuel
32	28	35.60000	50.30000	40.9907	25.1	32.4

Net Amp-Hours Used Per Cycle	DC Energy Consumed	AC Energy Consumed	Cumulative Cycle Distance	City Fleet Utility Factor	City FUF x CREE	Electric Only Fuel Consumption
Amp-hours	*W-hours*	*W-hours*	*mi*	*UF*	*UF*	*gal/mi equiv*
-5.037	-1916.075	2389.200	7.45	0.2427	0.0000	0.00962
-5.044	-1824.415	2274.907	14.90	0.1832	0.0000	0.00909
-4.439	-1548.767	1931.195	22.35	0.1373	7.7419	0.00777
0.222	76.535	-95.433	29.80	0.1026	22.1700	-0.00038
-1.168	-401.091	500.130	37.25	0.0765	21.0654	0.00201

Per Cycle	Consumed	Consumed	Cycle Distance	Utility Factor	CREE	Consumption
Amp-hours	*W-hours*	*W-hours*	*mi*	*UF*	*UF*	*gal/mi equiv*
-6.120	-2313.972	3111.3771	10.30	0.1232	2.8617	0.00902
-6.615	-2360.563	3174.0232	20.60	0.1167	0.0000	0.00920
-1.039	-361.520	486.1015	30.90	0.1054	17.0362	0.00141
-0.061	-21.194	28.4982	41.20	0.0921	16.2396	0.00008

		Charge-Depleting Operation				
Comb Unrd Adj FE - Conventional Fuel	Charge-Sustaining Driving Range [miles]	Units	City2 FE (Guide) - Alternative Fuel	Hwy2 Fuel FE (Guide) - Alternative Fuel	Comb2 Fuel FE (Guide) - Alternative Fuel	City2 Unadj FE - Alternative Fuel
27.932	425.40170	kW-hr/100 mi	47	44	46	33.3
		MPGe	76	68	72	107.57

Total Fuel Consumption Rate (gas + electric)	Total Fuel Consumption (gas + electric)	FUF x Total Consumption	Adjusted Cycle Measured Distance	Adjusted Cycle Theoretical Cumulative Distance	MDIUF	MDIUF x Adjusted CO2
gal/mi equiv	*gal-equiv*	*gal/mi equiv*	*miles*	*miles*	*UF*	*g/mi*
0.0096	0.0709	0.0023	5.1569	5.22	0.1546772	0
0.0091	0.0675	0.0017	5.1954	10.43	0.1262248	0
0.0140	0.1032	0.0019	5.21703	15.70	0.1045649	8.18253
0.0238	0.1756	0.0024	5.59492	21.36	0.0916991	25.99226
0.0329	0.2432	0.0025	5.78283	27.18	0.0768206	26.96369

(gas + electric)	(gas + electric)	Consumption	Distance	Distance	MDIUF	CO2
gal/mi equiv	*gal-equiv*	*gal/mi equiv*	*miles*	*miles*	*UF*	*g/mi*
0.0115	0.1179	0.0014	7.1673	7.21	0.2059786	6.53925
0.0092	0.0942	0.0011	7.1666	14.42	0.1559306	0
0.0195	0.1993	0.0021	7.21218	21.69	0.1200603	27.34361
0.0198	0.2027	0.0018	7.22703	28.96	0.0925664	22.97661

Hwy2 Unadj FE Alternative Fuel	Comb2 Unadj FE - Alternative Fuel	City2 Unrd Adj FE - Alternative Fuel	Hwy2 Unrd Adj FE - Alternative Fuel	Cmb2 Unrd Adj FE - Alternative Fuel	City CO2 Rounded Adjusted	Hwy CO2 Rounded Adjusted
31.8	32.6	47.4	44.0	46.0	0	15
97.31	102.70	75.5	68.2	72.0		

MDIUF x Adjusted Total Fuel Consumption	Cycle Theoretical Cumulative Distance	MDIUF for HOV Calculation	MDIUF x Fuel Consumption
gal-equiv	*miles*	*UF*	*gal/mi equiv*
0.00213	7.45	0.2118876	0.00204
0.00164	14.9	0.1589767	0.00145
0.00209	22.35	0.1205502	0.00169
0.00312	29.8	0.0923573	0.00220
0.00361	37.25	0.0714659	0.00235
	44.7	0.0558341	
	52.15	0.0440269	

	59.6	0.0350266	
	67.05	0.0281049	
	74.5	0.0227364	
	81.95	0.0185387	
	89.4	0.0152312	
	96.85	0.0126063	
	104.3	0.0105096	
	111.75	0.0088250	
	119.2	0.0074648	
	126.65	0.0063621	
	134.1	0.0054658	
	141.55	0.0047364	
	149	0.0041429	

Consumption	**Distance**	**Calculation**	**Consumption**
gal-equiv	*miles*	*UF*	*gal/mi equiv*
0.00339	10.3	0.2780522	0.00320
0.00205	20.6	0.1879014	0.00173
0.00334	30.9	0.1295390	0.00253
0.00262	41.2	0.0910246	0.00180
	51.5	0.0651335	
	61.8	0.0474159	
	72.1	0.0350838	
	82.4	0.0263611	
	92.7	0.0200985	
	103	0.0155403	
	113.3	0.0121829	
	123.6	0.0096856	
	133.9	0.0078149	
	144.2	0.0064083	
	154.5	0.0053514	
	164.8	0.0045619	
	175.1	0.0039791	
	185.4	0.0035569	
	195.7	0.0032591	
	206	0.0030555	

Comb CO2 Rounded Adjusted	City CO2 Unadjusted	Hwy CO2 Unadjusted	Comb CO2 Unadjusted	City CO2 Unrounded Adjusted	Hwy CO2 Unrounded Adjusted	Comb CO2 Unrounded Adjusted	Charge-Depleting Driving Range [miles]
7	0.0	10.3	4.6	0.0	14.7	6.6	15.0

Annual Fuel C	Save/Spend		Gasoline Adjusted CO2			Range	Composite	MPG
Annual Fuel Cost	$ You Save	$ You Spend	City CO2 Rounded Adjusted	Hwy CO2 Rounded Adjusted	Comb CO2 Rounded Adjusted (as shown on FE Label)	Driving Range (rounded to nearest 10 miles)DISTANCE	City PHEV Composite MPGe	
$ 1,600	$ 3,500		354	274	318	440	33	

PHEV Composite MPG		PHEV Composite CO2			Charge Depleting Driving Range		
Hwy PHEV Composite MPGe	Comb PHEV Composite MPGe	PHEV Composite Rounded Adjusted Combined CO2	PHEV Composite Rounded Adjusted Combined CO2	CO2-PHEV Composite Rounded Adjusted Combined CO2	City Range on Electricity (miles)	Hwy Range on Electricity (miles)	Comb Range on Electricity as shown on FE Label (miles)
40	36	226	176	203	14.78	15.44	15.0

Individual Utility Factors (MDIUFs)			PHEV Charge Depleting Fuel Consumption		
City Utility Factor (MDIUF)	Hwy Utility Factor (MDIUF)	Comb Utility Factor (MDIUF)	City (gal/100 mi)	Hwy (gal/100 mi)	Combined (gal/100 mi) as listed on blended PHEV labels
0.3687	0.3807	0.3741	0	0.17	0.1

Version 15.

May 29, 2014.

Corrected table in READ ME! Worksheet for 2020 and later CAFE calculations. It indicated no use of 0.15 or DO

Columns AI and AJ, which use an adjustment factor based on the 5-cycle derived equation or 0.7 (whichever is

Cell D19 units changed to gal-e/mile (was gal/e).

Added capability to calculate the HOV lane values (used for specific state purposes).

E PEF, which was incorrect.

higher) are now used to calculate label values for Rcdc, Rcda, and AER. These values previously used 0.7 only.

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Wed 8/5/2015 6:54:09 PM
Subject: RE: PHEV calculation spreadsheet

Jim:

Will do. Did you see my meeting invitation to discuss Ex. 4 - CBI testing?

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]

Sent: Wednesday, August 05, 2015 2:50 PM
To: Kata, Leonard (EEO)
Subject: PHEV calculation spreadsheet

Len, please pass this on to Hannah whoever is doing the numbers.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: French, Roberts
Sent: Wednesday, August 05, 2015 2:01 PM
To: Snyder, Jim
Subject: RE: Questions regarding CD-15-15

There will be a new version in the next month or two that has a few more things automated and will add some new CAFÉ calculations that came about as a result of new legislation from last December (for MY16 CAFÉ).

Please let users know they should contact me with any questions.

Thanks,

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 8/5/2015 8:25:54 PM
Subject: DAILY: FCA hacking risk kept from regulators for 18 months | Lexus experiments with no-haggle pricing | Volvo plans XC90 recall for airbag glitch | EPA studies higher octane gas

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August 5, 2015

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FCA hacking risk kept from regulators for 18 months

Fiat Chrysler Automobiles waited 18 months to tell federal safety regulators about a security flaw in radios being installed in more than a million vehicles that hackers later exploited to seize control of a Jeep last month.

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The Volvo recall would mark the latest case of Takata Corp. inflators suddenly rupturing with excessive force and hurling shrapnel into the passenger compartment. Our newest viral videos this week emerge from the Arab world.

It is unclear whether Takata inflators are involved in the Volvo recall, which is based on findings by the agency's Office of Transportation and Air Quality, Christopher Grundler, director of the

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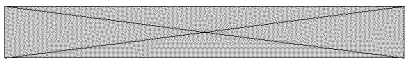
EVENTS

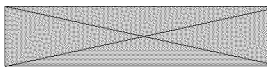
» Sept. 22 - NY Marketing Seminar

» Oct. 1 - Automobilwoche Kongress

» Oct. 14 - Best Dealerships To Work For

» Jan. 12 - Automotive News World Congress





WEBINARS

» Aug. 6 at 2pm ET - New Strategies for Retail
by MakeMyDeal

» Aug. 12 at 2pm ET - Chat & Text
by Contact at Once!

» Aug. 20 at 2pm ET - Online Marketing
by CarGurus

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1155 Gratiot Ave.
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From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Wed 8/5/2015 8:31:02 PM
Subject: The 2016 Audi TT is Closer Than Ever to a True Sportscar
MAIL_CONVERSATION_TOPIC: The 2016 Audi TT is Closer Than Ever to a True Sportscar
Created: Fri 3/18/2016 6:18:30 PM

More importantly, it's fun as-is, and proof that the TT S is going to be amazing.

View article...

From: Snyder, Jim
Required Attendees: McBryde, Dan; Smithson, Arlene; Wright, DavidA; Giles, Michael (EEO); Sigelko, Jenny (EEO); Horton, Garett (VWGoA Imp); Schlueter, Hannah (EASZ/1); Kata, Leonard (EEO)
Location: AA-Room-Office-N125-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Audi A3 e-tron PHEV Testing at EPA
Start Date/Time: Tue 8/11/2015 5:00:00 PM
End Date/Time: Tue 8/11/2015 6:00:00 PM

Audi is hoping to get their vehicle scheduled for week of 8/31, **Ex. 4 - CBI**

Ex. 4 - CBI

To all:

On August 4, 2015, representatives from Volkswagen Group of America, Inc. (VWGoA) had a brief telephone conversation with EPA, which included discussion of certification of the 2016 model year Audi A3 e-tron plug-in hybrid vehicle. At that time, VWGoA informed EPA that confirmatory testing of this concept could begin the week of August 31, 2015, (assuming that the agency will request confirmatory testing at the EPA laboratory). A definite test date will not be established until submission of the test request.

EPA requested a meeting to provide the agency with information regarding vehicle technology, operating characteristics, and information concerning test considerations. In light of the short lead-time before the projected test date, we prefer to conduct this meeting as soon as possible.

Based on my notes from the recent telephone conference, I have listed the following discussion points:

- Coordination with the EPA Laboratory Branch, of the charging box; including necessary hardware, wiring, operation and so on.
- Vehicle operation strategy and function (e.g., blended mode, early engine start)
- Data handling
- Energy calculations
- Other

EPA informed VWGoA that PHEV testing can be completed quickly (within two weeks), but since the process is a long string of testing, it can take a longer period if something goes wrong (up to six weeks). Thus, the importance of having this discussion. As stated, the discussion would be by telephone. Call-in details are shown below.

@Jim - Tuesday afternoon August 11, 2015, is the soonest our colleagues in Germany would be available. An alternate meeting time would need to be after that date. Please let me know if this is acceptable. I expect that you may forward this invitation to other EPA staff.

Best regards,

Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

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Ex. 6

Forgot your dial-in PIN? | Help

[!OC([1033])!]

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Schlueter, Hannah (EASZ/1)
Sent: Wed 8/5/2015 8:56:42 PM
Subject: Automatische Antwort: Ex. 4 - CBI Testing at EPA

Ich bin bis einschliesslich Ex. 6 außer Haus.

I will be out of the office through Ex. 6

Meine Emails werde ich nur sporadisch lesen können.

I will not be able to read my emails regularly.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 8/6/2015 2:19:10 AM
Subject: TRAVERSE CITY DAY 3: FCA to ease cost restraints, focus on quality | Lexus' no-haggle experiment | EPA considers higher octane gasoline | Electric vehicle mandate tensions spill out at MBS

View in a Web browser | Forward to a colleague

August 5, 2015

Click here for the Thursday Traverse City Show Daily

Complete online coverage of the CAR Management Briefing Seminars from Traverse City, Mich.

FCA will free purchasing staff from cost restraints to focus on quality

Fiat Chrysler plans to no longer hold its purchasing staffers to individual cost-saving goals on parts. The goals had effectively tied the staffers' hands when suppliers sought pricing relief. Instead, the automaker says that cost savings goals will be managed by teams, allowing greater flexibility with individual suppliers.

Lexus experiments with no-haggle dealer pilot, Bracken says

Lexus is piloting a haggle-free pricing program with 12 of its 236 U.S. dealers this year, says Jeff Bracken, general manager of Toyota Motor

Blogs

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Automotive News today.

[redacted] year end.

[redacted]

Go big or go home: Supplier mergers accelerate

It's a banner year for mergers and acquisitions. In the first six months of the year, the world's automotive suppliers have spent $28 billion to buy other companies - more than in all of last year, when M&A deals totaled $20 billion.

Auto suppliers have until Sept. 4, 2015 to apply for the 2016

Automoti News PACE Awards. The awards, which are co-sponsore by EY and the Transpor Research Center Inc., recogniz suppliers for game changing commerc innovatio Winners will be announc at a gala awards ceremon on April 11, 2016, in Detroit. The Automoti News PACE Awards program is open to all automoti suppliers The applicati fee is $1,600. To apply, visit www.aut Questions Call 313-446-

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customerservice@autonews.com

From: Horton, Garett (VWGoA Imp)
Location: AA-Room-Office-N125-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Zugesagt: Ex. 4 - CBI Testing at EPA
Start Date/Time: Tue 8/11/2015 5:00:00 PM
End Date/Time: Tue 8/11/2015 6:00:00 PM

;

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Schuetze, Michael (N/EA-521)[Michael.Schuetze@audi.de]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Rodgers, William (EEO)
Sent: Thur 8/6/2015 4:14:15 PM
Subject: RE: Meeting request

Hello Jim,

Just as follow up to our phone conversation today. Please us informed about your schedule and we will make ourselves available during the week of August 17th. As discussed the purpose of the meeting will be to present our intention to use existing durability data from a [redacted] for Tier 3 compliance.

Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, August 06, 2015 9:05 AM
To: Rodgers, William (EEO)
Cc: Schuetze, Michael (N/EA-521); Kata, Leonard (EEO)
Subject: RE: Meeting request

I can't promise a specific day right now. We are planning to do coastdown testing that week so I don't know when I'll be in the office. It depends on the weather each day. Rain and wind mean I'm available.

Ex. 4 - CBI

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, August 05, 2015 8:15 AM
To: Snyder, Jim
Cc: Schuetze, Michael (N/EA-521); Kata, Leonard (EEO)
Subject: Meeting request

Hello Jim,

Myself and Michael Schuetze of Audi would like to meet with you at your offices to discuss alternative deterioration factors for upcoming certification of the Ex. 4 - CBI We plan to be at EPA late morning August 17th and all day August 19th supporting Porsche confirmatory testing so either day would work good for us. Please let us know if you are available these days and a place and time to meet.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Thur 8/6/2015 6:07:47 PM
Subject: German skirmish: 2015 VW GTI vs. Golf TDI vs. Audi A3 TDI
MAIL_CONVERSATION_TOPIC: German skirmish: 2015 VW GTI vs. Golf TDI vs. Audi A3 TDI
Created: Fri 6/17/2016 4:29:41 PM

In the modern days in which cars are looking, sounding, and acting different for the sake of brand identity, leave it to the Volkswagen Group to borrow a page from the American playbook of offering multiple vehicles based on a shared platform. It all begins with a shared chassis—in this case, a front-wheel-drive one called MQB—that serves as the foundation upon which different body styles from the many automakers under Volkswagen's family umbrella can be developed. The family patriarch here, the relatively mundane Golf hatchback, is a fantastic jumping-off point for unique derivatives. The big question: How different could cars with similar backgrounds really be to drive? The first answer to that question is the Golf GTI, the textbook hot hatchback that wears a nameplate seven generations old. It replaces the Golf's standard engine and suspension settings with a driver-focused setup and quick reflexes. A counterpoint to the GTI is the Golf TDI, which is as focused on efficiency as the GTI is on performance. In this iteration, the Golf TDI swaps out the standard engine for a turbodiesel, and is tuned for achieving high fuel economy figures. The luxurious, third-party surprise here is the Audi A3, a traditional sedan with a trunk that's very similar under the sleek sheetmetal. It, too, comes in TDI diesel trim, which we believe is its most compelling. Are the members of this trio as similar as they seem? Or can they prove that they are they as distinct as their historic nameplates suggest? No spoiler alerts here: Each model is a fully vetted choice of ours. Here's our guide to deciding which one best suits what you're looking for in a daily driver: The backroads favorite: 2015 Volkswagen Golf GTI For every GTI driver, there is a moment of realization that occurs just after a few minutes behind the wheel: You suddenly understand that it's about the best new car that money can buy, and you wonder how you ever lived without one. It's hard to quantify the secret sauce that makes the GTI so fun to live with. (Ask the NYDN Autos staff: Among us, we're past and current GTI owners.) It looks like a Golf hatchback, inside and out, with a few bespoke touches. Redesigned front and rear treatments of the bumpers and fasciae complement the interior's superb front seats. Do yourself a favor and stick with the lower-trim GTI models, which offer tartan cloth. Open the hatchback liftgate, fold down the rear seats, and enjoy a cargo area that's rectangular, flat, and accommodating. The best part about having a GTI as a daily driver is being able to drive it like a sports car, no matter what condition or upon which road surface. Its steering is on-point and direct. Its suspension soaks up bumps but is a barometer of road surfaces. The 6-speed manual transmission offers satisfaction in a very visceral way, but the dual-clutch automatic is even quicker to shift and enjoyable in a rally-driver sense. Punch the throttle and watch the GTI come to life, singing a refined song up to redline. Bravissimo. In short, the GTI is beyond "fun to drive," offering the benefits of a traditional sports car with the versatility of an SUV—and, if you live in a major city, easiness to park. Keep it simple, and you'll enjoy the GTI just about every moment that you're behind the wheel. Best at: Everything. The one we'd have: Golf GTI S, the base model, with either transmission, and as few options as possible. (Go for the sublime performance pack at your wallet's peril.) Price: $26,205 (includes $820 destination fee) Powertrain: 210-hp turbocharged four-cylinder engine, 6-speed manual or dual-clutch automatic transmission, front-wheel drive. Fuel economy (mpg): 25 city / 34 highway Diesel hatchback dynamo: 2015 Volkswagen Golf TDI The world's nearly perfect hatchback has a

diesel-powered sibling that's almost equally fun to drive, and it's called Golf TDI. It looks more like a Golf than a GTI in terms of aggressive styling, but the TDI is closer than you might imagine to it in how it drives. Credit the Golf TDI's turbocharged diesel engine, which produces 150 hp and 236 lb-ft. of torque—more than enough to liven up the workaday driving experience. The only package more perfect is the not-for-America Golf GTD, which, as its name suggests, bundles the best aspects of both models. Because buying a diesel in the United States is an inherently calculated decision, we'd go for the mid-level Golf TDI SE with four doors. Skipping the top-trim TDI SEL means doing without automatic climate control and navigation, but it also means receiving smaller wheels and a more comfortable driving experience. The cabin is basically identical to the GTI's, save for the availability of funky, plaid seats. Just like the GTI, the Golf TDI is fun to drive in nearly every setting, with good steering feedback and a suspension that helps you carve through corners. But, to fully reap the benefits of the Golf TDI, you have to let the hatchback works its magic on long highway stretches. Let the transmission find its way to top gear—either the sweet 6-speed manual or the brilliant 6-speed dual-clutch automatic—and watch the mpg figures rise. You'll be hard-pressed to consider a Toyota Prius after experiencing joy when driving the Golf TDI. Best at: Making quick and competent work of the highway hustle. The one we'd have: Golf TDI SE, the mid-level Golf TDI, with the intuitive and hyper-efficient dual-clutch automatic. Price: $26,715 (includes $820 destination fee) Powertrain: 150-hp turbocharged four-cylinder engine, 6-speed manual or dual-clutch automatic transmission, front-wheel drive. Fuel economy (mpg): 30 city / 45 highway Frugal luxury with a trunk: 2015 Audi A3 TDI And for its next trick, the MQB chassis architecture spawns a luxury car. You could argue that an Audi that crests over the $30,000 mark hardly belongs in this comparison, but that would be to discount its similarity to the other two models—as well as just how good of a choice the A3 is. In a market segment bursting with entry-level luxury models, the A3 is a refined choice that reflects a distillation of the best features of top-trim Audis, and not a dumbing-down. The A3 is about the size of a first-generation A4, and it feels as luxurious as that model did. Build quality, inside and out, is first rate. The exterior and interior design are dead giveaways that the A3 is a modern Audi. This isn't a dressed-up Volkswagen diesel, but a thoroughly engineered luxury car. Curiously, the A3 TDI is one of few Audi models to offer front-wheel drive, but torque steer is controlled well and we never found ourselves wishing for more traction. Nonetheless, handling and driving dynamics fall somewhere in between the Golfs GTI and TDI, light and precise with easy-to-manage accuracy. Even an unexpected flat tire, thanks to a sinkhole-sized pothole leftover from winter, failed to dampen the A3's enthusiasm. (This experience leads us to suggest the smaller wheel/tire package, however, noting our colleagues' experiences and other MQBs' predilection for pothole problems.) If you're looking for a step up from the Golf family, or simply desire a trunk in place of the hatchback, head straight for the A3, and evaluate the TDI—even if you weren't considering a diesel. Best at: Acting as the automotive "club level upgrade." The one we'd have: A3 TDI Premium Plus, which adds premium touches and a standard sport suspension, and the optional MMI navigation system. Price: $33,495 (includes $895 destination fee) Powertrain: 150-hp turbocharged four-cylinder engine, 6-speed automatic transmission, front-wheel drive. Fuel economy (mpg): 31 city / 43 highway

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From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Thur 8/6/2015 6:10:33 PM
Subject: German skirmish: 2015 VW GTI vs. Golf TDI vs. Audi A3 TDI
MAIL_CONVERSATION_TOPIC: German skirmish: 2015 VW GTI vs. Golf TDI vs. Audi A3 TDI
Created: Fri 3/18/2016 6:18:29 PM

In the modern days in which cars are looking, sounding, and acting different for the sake of brand identity, leave it to the Volkswagen Group to borrow a page from the American playbook of offering multiple vehicles based on a shared platform. It all begins with a shared chassis—in this case, a front-wheel-drive one called MQB—that serves as the foundation upon which different body styles from the many automakers under Volkswagen's family umbrella can be developed. The family patriarch here, the relatively mundane Golf hatchback, is a fantastic jumping-off point for unique derivatives. The big question: How different could cars with similar backgrounds really be to drive? The first answer to that question is the Golf GTI, the textbook hot hatchback that wears a nameplate seven generations old. It replaces the Golf's standard engine and suspension settings with a driver-focused setup and quick reflexes. A counterpoint to the GTI is the Golf TDI, which is as focused on efficiency as the GTI is on performance. In this iteration, the Golf TDI swaps out the standard engine for a turbodiesel, and is tuned for achieving high fuel economy figures. The luxurious, third-party surprise here is the Audi A3, a traditional sedan with a trunk that's very similar under the sleek sheetmetal. It, too, comes in TDI diesel trim, which we believe is its most compelling. Are the members of this trio as similar as they seem? Or can they prove that they are they as distinct as their historic nameplates suggest? No spoiler alerts here: Each model is a fully vetted choice of ours. Here's our guide to deciding which one best suits what you're looking for in a daily driver: The backroads favorite: 2015 Volkswagen Golf GTI For every GTI driver, there is a moment of realization that occurs just after a few minutes behind the wheel: You suddenly understand that it's about the best new car that money can buy, and you wonder how you ever lived without one. It's hard to quantify the secret sauce that makes the GTI so fun to live with. (Ask the NYDN Autos staff: Among us, we're past and current GTI owners.) It looks like a Golf hatchback, inside and out, with a few bespoke touches. Redesigned front and rear treatments of the bumpers and fasciae complement the interior's superb front seats. Do yourself a favor and stick with the lower-trim GTI models, which offer tartan cloth. Open the hatchback liftgate, fold down the rear seats, and enjoy a cargo area that's rectangular, flat, and accommodating. The best part about having a GTI as a daily driver is being able to drive it like a sports car, no matter what condition or upon which road surface. Its steering is on-point and direct. Its suspension soaks up bumps but is a barometer of road surfaces. The 6-speed manual transmission offers satisfaction in a very visceral way, but the dual-clutch automatic is even quicker to shift and enjoyable in a rally-driver sense. Punch the throttle and watch the GTI come to life, singing a refined song up to redline. Bravissimo. In short, the GTI is beyond "fun to drive," offering the benefits of a traditional sports car with the versatility of an SUV—and, if you live in a major city, easiness to park. Keep it simple, and you'll enjoy the GTI just about every moment that you're behind the wheel. Best at: Everything. The one we'd have: Golf GTI S, the base model, with either transmission, and as few options as possible. (Go for the sublime performance pack at your wallet's peril.) Price: $26,205 (includes $820 destination fee) Powertrain: 210-hp turbocharged four-cylinder engine, 6-speed manual or dual-clutch automatic transmission, front-wheel drive. Fuel economy (mpg): 25 city / 34 highway Diesel hatchback dynamo: 2015 Volkswagen Golf TDI The world's nearly perfect hatchback has a

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 8/6/2015 6:26:05 PM
Subject: TRAVERSE CITY WRAP-UP: Top stories, staff blogs, video features and Show Dailies from the now-concluded 2015 Management Briefing Seminars

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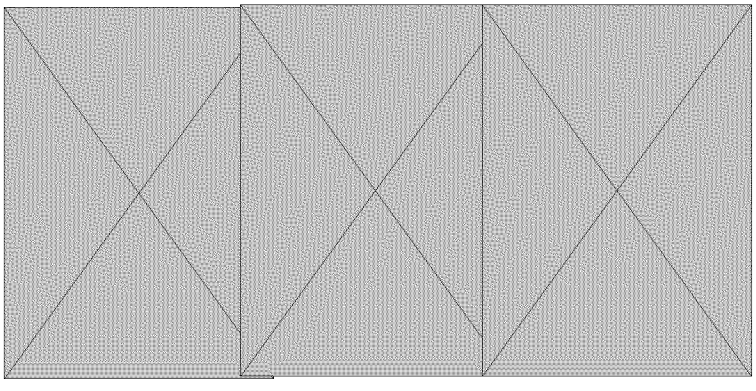
August 6, 2015

Read our Traverse City Show Dailies



Here are the top stories as well as our staff blogs and video features from the now-concluded 2015 Management Briefing Seminars in Traverse City, Mich.

FCA will free purchasing staff from cost restraints to focus on quality

Blogs

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Fiat Chrysler plans to no longer hold its purchasing staffers to individual cost-saving goals on parts. The goals had effectively tied the staffers'

NEWS ANALYSIS

U.S. decertifies vehicle mandates

spin out at WTO

automakers and U.S. regulators over policies to promote electric vehicles spilled into the open on Tuesday, in the high stakes struggle over the future of automotive technology.

that cost savings goals will be managed by teams, allowing greater

lighter solutions, and even redesigning parts that BMW had already previously redesigned to cut weight.

Photo Galleries

Aftermath of the storm wreaking havoc in Traverse City

>> GALLERY

Auto suppliers have until Sept. 4, 2015, to apply for the 2016 Automoti News PACE Awards. The awards, which are co-sponsore by EY and the Transpor Researcl Center Inc., recogniz suppliers for game changing commerc innovatic Winners will be announc at a gala awards ceremon on April 11, 2016, in Detroit. The Automoti News

PACE Awards program is open to all automoti suppliers The applicati fee is $1,600. To apply, visit www.aut Questions Call 313-446-6039.

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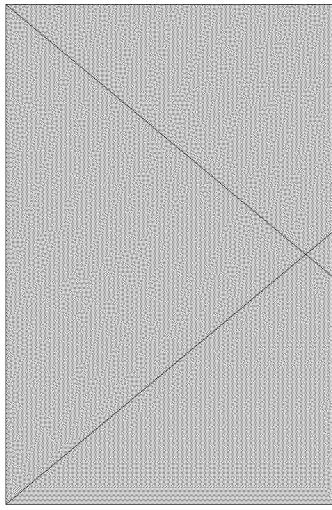

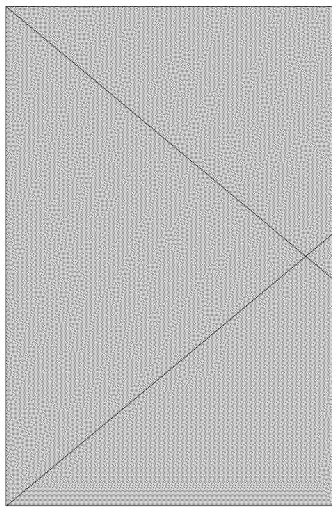

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To: Poirier, Christi[Poirier.Christi@epa.gov]
Cc: Ball, Joel[ball.joel@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; Danzeisen, Karen[Danzeisen.Karen@epa.gov]; Good, David[good.david@epa.gov]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]; Verify Help Desk[verifyhelp@csc.com]; Wright, DavidA[Wright.DavidA@epa.gov]
From: Vincent E Coleman
Sent: Thur 8/6/2015 7:30:43 PM
Subject: RE: MY2016 NMOG + NOx COMP Calculation Problems (HLP-6505)

Thank you Christi. We will let you know if we want to have a meeting for further discussion.

Vincent

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

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"Poirier, Christi" <Poirier.Christi@epa.gov>

08/06/2015 02:33 PM

To Verify Help Desk@CSC

cc "Danzeisen, Karen" <Danzeisen.Karen@epa.gov>, "Good, David" <good.david@epa.gov>, "Ball, Joel" <ball.joel@epa.gov>, "Dalton, Joel" <Dalton.Joel@epa.gov>, "Peavyhouse, Robert" <Peavyhouse.Robert@epa.gov>, "Wright, DavidA" <Wright.DavidA@epa.gov>

Subject RE: MY2016 NMOG + NOx COMP Calculation Problems (HLP-6505)

Vincent-

Ex. 4 - CBI

in which case we would void the test and retest.

We checked some tests and it works OK for FTP emissions (applying only the upward adjustment factor and not the downward adjustment factor)---for both EDVs and FEDVs. Which leads to the question-----How does Verify know not to apply the downward adjustment factor?

The upward adjustment factor should also be applied to Tier 3/LEV 3 FTP (NMOG + NOx) emission standards for EDVs and FEDVs----which I hope is working OK. Verify is currently working OK for FEDVs which are tested here at EPA----although, again, I don't know why Verify (correctly) ignores the downward adjustment factors.

Dave

From: Vincent E Coleman [mailto:vcoleman2@csc.com] **On Behalf Of** Verify Help Desk
Sent: Tuesday, August 04, 2015 11:52 AM
To: Poirier, Christi
Cc: Danzeisen, Karen
Subject: RE: MY2016 NMOG + NOx COMP Calculation Problems (HLP-6505)

Hello Christi,

Volkswagen reported that they are having an issue getting the correct SFTP NMOG + NOx Composite calculation to display on their CSI because Verify is not adding the Upward Adjustment Factor at the end of the calculation.

We confirmed that for composite Cert Level calculations, Verify is currently not applying Diesel Upward or Downward adjustment factors. It has been like this for HC-NM+NOX-COMP, CO-COMP and PM-COMP as well. For regular emission cert levels, Verify applies it when the fuel is diesel.

We want to check to see if Verify should be applying Diesel Upward or Downward adjustment factors for composite Cert Level calculations. Please advise.

Vincent

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

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To Verify Help Desk@CSC

cc

"Allen, Gregory (EEO)" <Gregory.Allen@vw.com>

Subject RE: MY2016 NMOG + NOx COMP Calculation Problems (HLP-6505)

08/04/2015 11:08 AM

Hello Vince,

I appreciate you looking into this matter.

Ex. 4 - CBI

As always, thanks for the help!

Regards,

Greg Allen
VWGoA EEO
(248)754-4209

From: Vincent E Coleman [mailto:vcoleman2@csc.com] **On Behalf Of** Verify Help Desk
Sent: Tuesday, August 04, 2015 10:59 AM
To: Allen, Gregory (EEO)
Subject: Re: MY2016 NMOG + NOx COMP Calculation Problems (HLP-6505)

Hello Mr. Allen,

Ex. 4 - CBI

Vincent

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

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To Verify Help Desk@CSC

cc

Subject MY2016 NMOG + NOx COMP Calculation Problems

"Allen, Gregory (EEO)" <Gregory.Allen@vw.com>

08/03/2015 02:52 PM

Hello,

I'm having some issues getting the correct SFTP Nmog + Nox Composite calculation to display in our CSI.

Ex. 4 - CBI

Ex. 4 - CBI

Thanks!

Regards,

Greg Allen
VWGoA EEO
(248)754-4209

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 8/6/2015 7:36:54 PM
Subject: P.M. NEWSCAST: A Tesla is hacked | Behind FCA's purchasing makeover | VW's tool for U.S. success | Audi plug-in price tag | Spider-proofing Fords

August 6, 2015

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TOP STORY: Now, a Tesla is hacked

Audi plug-in price tag »

Why FCA changed gears »

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Automotive News

1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 8/6/2015 8:45:54 PM
Subject: DAILY: Lexus leans on leases as luxury race tightens | A Tesla gets hacked | TrueCar CEO to leave | Fiat Chrysler retools purchasing goals | Why Hyundai sticks with its warranty | BMW's next i car

Today's most read story

FCA will free purchasing staff from cost restraints to focus on quality

August 6, 2015

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Lexus leans on leases as U.S. luxury race tightens

Lexus is relying more on leasing than BMW and Mercedes-Benz as it challenges the German brands for the lead in U.S. sales of luxury vehicle sales. About 62 percent of Lexus vehicles have been leased this year, compared with about half for BMW and Mercedes, according to Edmunds.com data.

Hackers turn off Tesla Model S at low speed

MOST READ (Last 7 days)

Sales rise

BLOG: RICHARD JOHNSON

Fiat Chrysler backtracks on cost constraints to keep focus on quality

Why Hyundai sticks by its warranty offer

Fiat Chrysler plans to no longer hold its purchasing staffers to individual cost-saving goals on parts. The goals had effectively tied the staffers' hands when suppliers sought pricing relief.

Tesla's Model S had security flaws that could allow hackers to take control of the sedan. Cybersecurity experts found a way to remotely unlock a Model S and turned it off at low speed, one of six major flaws they reported.

Scott Painter, founder of the online car-shopping site TrueCar, is stepping down as CEO after the company reported a net loss of $7.2 million in the first quarter of this year. TrueCar said a successor is expected to take office by year-end.

Why would a company like Hyundai Motor Co. want to put a 10-year/100,000-mile warranty on its cars? Is it worth it? Can Hyundai keep doing it? Or will it go away with watering down its industry-leading warranty coverage?

- 5.3% on luxury crossover, truck volume keeping Detroit Lion turned auto dealer, dies at 70
- Ford, Ram adopt low-tech solution for tough IIHS test
- Subaru's low-paid foreign workers power an export boom
- Subaru's non-automotiv engine a big hit at CAR's event

Lexus plans 2nd 'flagship' model to augment LS sedan

BMW CEO Krueger hints at new 'i' car

Audi prices A3 e-tron plug-in hybrid from $38,825

When Johanna Quandt turned an ambitious Henry Ford II down

Lear targets acquisitions to enhance electrical unit

Tesla sets Q2 sales record, but losses grow

Opportunities grow for U.S. parts suppliers moving into China

Takata swings to Q1 profit on higher U.S. sales

Consumers shrug fuel efficiency goals, McConnell says

GM July sales drop 4% in China, but margins hold up

Nexteer, TI Automotive plan new home offices in suburban Detroit

Local Motors details plans for street-legal 3-D car

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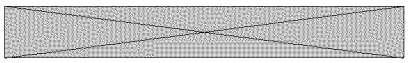
» Sept. 22 - NY Marketing Seminar

» Oct. 1 - Automobilwoche Kongress

» Oct. 14 - Best Dealerships To Work For

» Jan. 12 - Automotive News World Congress

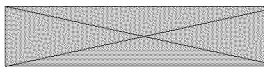


WEBINARS

» Aug. 12 at 2pm ET - Chat & Text
by Contact at Once!

» Aug. 20 at 2pm ET - Online Marketing
by CarGurus

» Sept. 1 at 2pm ET - Used Inventory Financing
by NextGear Capital



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From: Kata, Leonard (EEO)
Location: AA-Room-Office-N125-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Accepted: Ex. 4 - CBI Testing at EPA
Start Date/Time: Tue 8/11/2015 5:00:00 PM
End Date/Time: Tue 8/11/2015 6:00:00 PM

;

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Fri 8/7/2015 7:40:45 AM
Subject: Why Car Companies Should Be Terrified of Google Auto
MAIL_CONVERSATION_TOPIC: Why Car Companies Should Be Terrified of Google Auto
Created: Fri 3/18/2016 6:18:29 PM

On Monday, Mercedes Benz, Audi and BMW announced an unlikely partnership. The three car companies dropped a collective $3.1 billion to buy Nokia's digital mapping tech , dubbed HERE. BMW honcho Harald Krüger said in a press release, "HERE will play a key role in the digital revolution of mobility, combining high definition maps and data from vehicles to make travel safer and easier for everyone." The deal, which is expected to close in early 2016, is a clear signal that the auto industry plans to compete head-to-head with Google and other tech companies developing self-driving cars. And it's a big, and very telling, step: individual car companies are willing to join forces with competitors to have a better shot at winning the robocar race. Because when it comes to driverless cars, the best manufacturers will be those with the best, most up-to-date maps. And that honor currently goes to Google and its 2013 acquisition Waze.

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To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Fri 8/7/2015 4:05:17 PM
Subject: Green Car Report Daily Headlines

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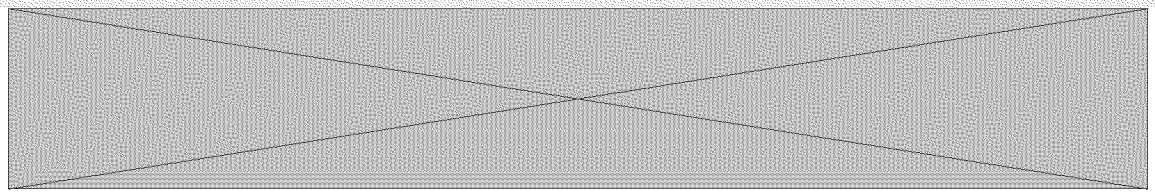

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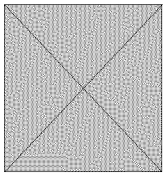
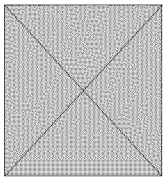
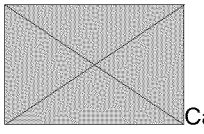




The latest from your friends at GCR:

CA Renewable Hydrogen Rule: Forcing The Carbon Numbers To Work

Aug 07, 2015 03:40 pm | feedback@highgearmedia.com (John Voelcker)

 California's plan to reduce carbon emissions from transportation anticipates a mix of battery-electric and hydrogen fuel-cell vehicles. Recharging batteries from the electric grid is relatively simple, but producing hydrogen fuel requires a good deal of energy to split pure hydrogen out of other compounds. To ensure that the carbon footprint of...

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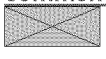
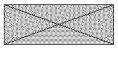
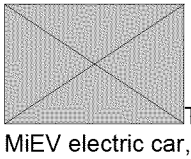




2016 Mitsubishi i-MiEV Drive, 2015 Ford F-150 Crash Tests, EPA Power Plan Backlash: Today's Car News

Aug 07, 2015 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today, we drive the 2016 Mitsubishi i-MiEV electric car, the Insurance Institute for Highway Safety (IIHS) crash tests the 2015 Ford F-150 full-size

pickup truck, and analysts predict resistance to the Environmental Protection Agency's (EPA) Clean Power Plan emissions rules. All this and more on Green Car Reports. A lot has happened since the...

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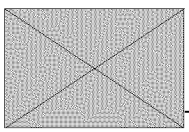
Are These Tesla Model 3 Prototypes Under Those Sheets? (Video)

Aug 07, 2015 01:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Tesla Motors says it will unveil the 200-mile, $35,000 Model 3 electric car next year, ahead of a production start presently scheduled for 2017. The new sedan is a key part of Tesla's plan to build 500,000 cars per year by 2020. But while Tesla has already revealed the car's target price and range, it hasn't revealed anything about what the Model...

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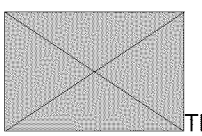
Final EPA Power-Plant Rules: Far More Impact On Coal States

Aug 07, 2015 12:30 pm | feedback@highgearmedia.com (John Voelcker)

 The completed rules issued this week by the EPA to limit carbon emissions from power plants run 1,560 pages--nighttime reading only for policy wonks. But the agency's final Clean Power Plan has changed considerably from the draft rules issued in June 2014. And as utility executives, advocacy groups, and politicians pore through the details, one...

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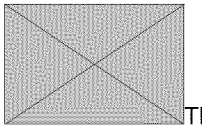
2016 Volkswagen e-Golf SE: $30K Price For New Electric Car Version

Aug 07, 2015 12:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 The 2016 Volkswagen e-Golf electric car's base price will drop by some $4,500 compared to the 2015 model, thanks to the addition of a new entry-level model. The VW e-Golf SE will start at $29,815 including destination, before any Federal, state, or local incentives. That compares to the $36,415 starting price of the only other e-Golf trim level...

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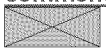
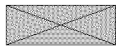
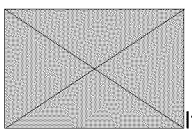




2015 Ford F-150 Aluminum-Body Pickup: Mixed IIHS Safety Scores

Aug 07, 2015 11:30 am | feedback@highgearmedia.com (Stephen Edelstein)

 It was one of the biggest questions about the 2015 Ford F-150: How would the truck's aluminum cab and pickup bed fare in today's rigorous safety testing? While aluminum has been used for the bodies of several luxury cars before now, Ford's decision to deploy it on the best-selling and high-volume F-150 generated spirited discussions about the...

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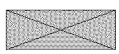
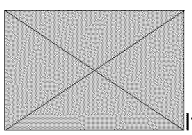


2016 Mitsubishi i-MiEV: Drive Report Of 62-Mile Electric Minicar

Aug 07, 2015 11:00 am | feedback@highgearmedia.com (Bengt Halvorson)

 It's been nearly four years since the tiny Mitsubishi i-MiEV hit the market. And considering the rapid evolution and transformation of the electric-car market that's occurred over the past several times the earth has gone around the sun, that's really light years. So when we decided to go back and revisit the little i-MiEV, which...

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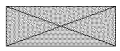

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California Environmental Protection Agency
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To: Ex. 7 @arb.ca.gov]
From: Bunker, Byron
Sent: Fri 8/7/2015 6:12:54 PM
Subject: RE: Call with Ex. 7

Yes. I can move my current 1:00 PM meeting on Monday if that time can work for Ex. 7.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

From: Ex. 7 @arb.ca.gov]
Sent: Friday, August 07, 2015 2:12 PM
To: Bunker, Byron
Subject: RE: Call with Ex. 7

I'm sorry, is 1pm EDT ok?

Ex. 7

California Environmental Protection Agency
Air Resources Board

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, August 07, 2015 11:02 AM
To: Ex. 7 @ARB
Subject: RE: Call with Ex. 7

Thanks Darlene. Monday at 12:30 EDT will work for me.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ex. 7 @arb.ca.gov]
Sent: Friday, August 07, 2015 12:38 PM
To: Bunker, Byron
Subject: RE: Call with Ex. 7

Is 6pm EDT too late? If not, Annette has Monday AM 9:30 PDT/12:30 EDT, will either work for you?

Ex. 7

California Environmental Protection Agency
Air Resources Board

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, August 07, 2015 9:07 AM
To: Ex. 7 @ARB

Cc: Ex. 7 @ARB
Subject: RE: Call with Ex. 7

Thanks Ex. 7

Unfortunately, I have a conflict at 9:30 (12:30 EDT). If 1:00 PM PDT (4:00 PM EDT) can work for Ex. 7 I can make that time work.

Ex. 7 – if your VW call gets done before 9:15 or so, let's talk. Assuming it goes until 9:30 we will need to look for another time.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ex. 7 @arb.ca.gov]
Sent: Friday, August 07, 2015 12:05 PM
To: Bunker, Byron
Subject: Call with Ex. 7

Byron,

I apologize, I was unable to locate a contact number to let you know Ex. 7 cannot make the 9am call. She will contact you asap, approximately about 9:30 AM.

Ex. 7

California Environmental Protection Agency
Air Resources Board

California Environmental Protection Agency
Air Resources Board

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7
Sent: Fri 8/7/2015 6:13:20 PM
Subject: RE: Call with Ex. 7

Yes, I have you on her calendar. I will have you call you at 734-214-4155.

Ex. 7

ECARS Division Office

Ex. 7

California Environmental Protection Agency
Air Resources Board

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, August 07, 2015 11:13 AM
To: Ex. 7
Subject: RE: Call with Ex. 7

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Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

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Sent: Friday, August 07, 2015 2:12 PM
To: Bunker, Byron
Subject: RE: Call with Ex. 7

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Ex. 7

ECARS Division Office

Ex. 7

California Environmental Protection Agency
Air Resources Board

From: Bunker, Byron [mailto:bunker.byron@epa.gov]

Sent: Friday, August 07, 2015 11:02 AM
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Subject: RE: Call with Ex. 7

Thanks Ex. 7 Monday at 12:30 EDT will work for me.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ex. 7
Sent: Friday, August 07, 2015 12:38 PM
To: Bunker, Byron
Subject: RE: Call with Ex. 7

Is 6pm EDT too late? If not, Ex. 7 has Monday AM 9:30 PDT/12:30 EDT, will either work for you?

Ex. 7

ECARS Division Office

626.459.4337 | darlene.chavez@arb.ca.gov

California Environmental Protection Agency
Air Resources Board

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, August 07, 2015 9:07 AM
To: Ex. 7
Cc: Ex. 7
Subject: RE: Call with Ex. 7

Thanks Ex. 7

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Ex. 7 if your VW call gets done before 9:15 or so, let's talk. Assuming it goes until 9:30 we will need to look for another time.

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Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ex. 7
Sent: Friday, August 07, 2015 12:05 PM
To: Bunker, Byron
Subject: Call with Ex. 7

Byron,

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Ex. 7

ECARS Division Office

Ex. 7

California Environmental Protection Agency
Air Resources Board

California Environmental Protection Agency
Air Resources Board

California Environmental Protection Agency
Air Resources Board

From: News
Sent: Fri 8/7/2015 6:43:41 PM
Subject: Why Car Companies Should Be Terrified of Google Auto
MAIL_CONVERSATION_TOPIC: Why Car Companies Should Be Terrified of Google Auto
Created: Fri 3/18/2016 6:18:44 PM

On Monday, Mercedes Benz, Audi and BMW announced an unlikely partnership. The three car companies dropped a collective $3.1 billion to buy Nokia's digital mapping tech , dubbed HERE. BMW honcho Harald Krüger said in a press release, "HERE will play a key role in the digital revolution of mobility, combining high definition maps and data from vehicles to make travel safer and easier for everyone." The deal, which is expected to close in early 2016, is a clear signal that the auto industry plans to compete head-to-head with Google and other tech companies developing self-driving cars. And it's a big, and very telling, step: individual car companies are willing to join forces with competitors to have a better shot at winning the robocar race. Because when it comes to driverless cars, the best manufacturers will be those with the best, most up-to-date maps. And that honor currently goes to Google and its 2013 acquisition Waze.

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To: Bunker, Byron[bunker.byron@epa.gov]; Ex. 7
From: Ex. 7
Sent: Fri 8/7/2015 7:19:51 PM
Subject: RE: Call with Ex. 7

Byron, I am free now, but booked 1-3 PDT.

Ex. 7

Emissions Compliance, Automotive Regulations and Science (ECARS) Division

California Air Resources Board

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, August 07, 2015 9:07 AM
To: Ex. 7
Cc: Ex. 7
Subject: RE: Call with Ex. 7

Thanks Ex. 7

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Byron

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Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ex. 7
Sent: Friday, August 07, 2015 12:05 PM
To: Bunker, Byron
Subject: Call with Ex. 7

Byron,

I apologize, I was unable to locate a contact number to let you know Ex. 7 cannot make the 9am call. She will contact you asap, approximately about 9:30 AM.

Ex. 7

ECARS Division Office

Ex. 7

California Environmental Protection Agency
Air Resources Board

California Environmental Protection Agency
Air Resources Board

To: Bunker, Byron[bunker.byron@epa.gov]; Ex. 7
From: Ex. 7
Sent: Fri 8/7/2015 7:20:01 PM
Subject: RE: Call with Ex. 7

We may have to try for Monday.

Ex. 7
Emissions Compliance, Automotive Regulations and Science (ECARS) Division

California Air Resources Board

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, August 07, 2015 9:07 AM
To: Ex. 7
Cc: Ex. 7
Subject: RE: Call with Annette Hebert

Thanks Ex. 7 .

Unfortunately, I have a conflict at 9:30 (12:30 EDT). If 1:00 PM PDT (4:00 PM EDT) can work for Ex. 7 I can make that time work.

Ex. 7 – if your VW call gets done before 9:15 or so, let's talk. Assuming it goes until 9:30 we will need to look for another time.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

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Ex. 7

ECARS Division Office

Ex. 7

California Environmental Protection Agency
Air Resources Board

California Environmental Protection Agency
Air Resources Board

To: Ex. 7
Ex. 7
From: Bunker, Byron
Sent: Fri 8/7/2015 7:21:02 PM
Subject: RE: Call with A Ex. 7

Hi Ex. 7

My 3:00 cancelled. I am free right now if you are. Just give me a call if you have a free minute.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ex. 7
Sent: Friday, August 07, 2015 3:20 PM
To: Bunker, Byron; Ex. 7
Subject: RE: Call with Ex. 7

Byron, I am free now, but booked 1-3 PDT.

Ex. 7

Emissions Compliance, Automotive Regulations and Science (ECARS) Division

California Air Resources Board

Ex. 7

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, August 07, 2015 9:07 AM
To: Ex. 7
Cc:
Subject: RE: Call with Ex. 7

Thanks Ex. 7

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Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: [redacted] Ex. 7
Sent: Friday, August 07, 2015 12:05 PM
To: Bunker, Byron
Subject: Call with [redacted] Ex. 7

Byron,

I apologize, I was unable to locate a contact number to let you know [redacted] Ex. 7 cannot make the 9am call. She will contact you asap, approximately about 9:30 AM.

[redacted] Ex. 7

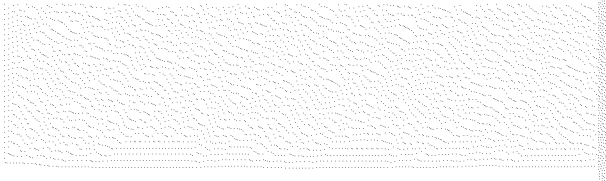
ECARS Division Office

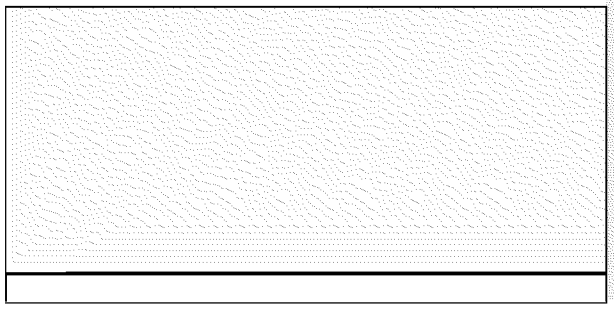
Ex. 7

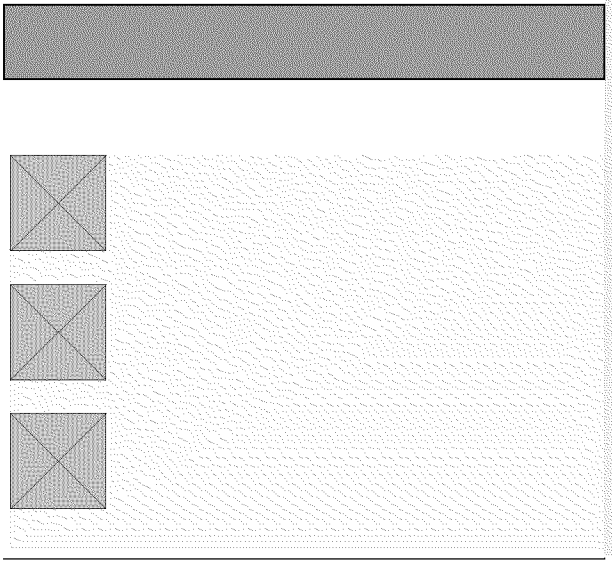
California Environmental Protection Agency
Air Resources Board

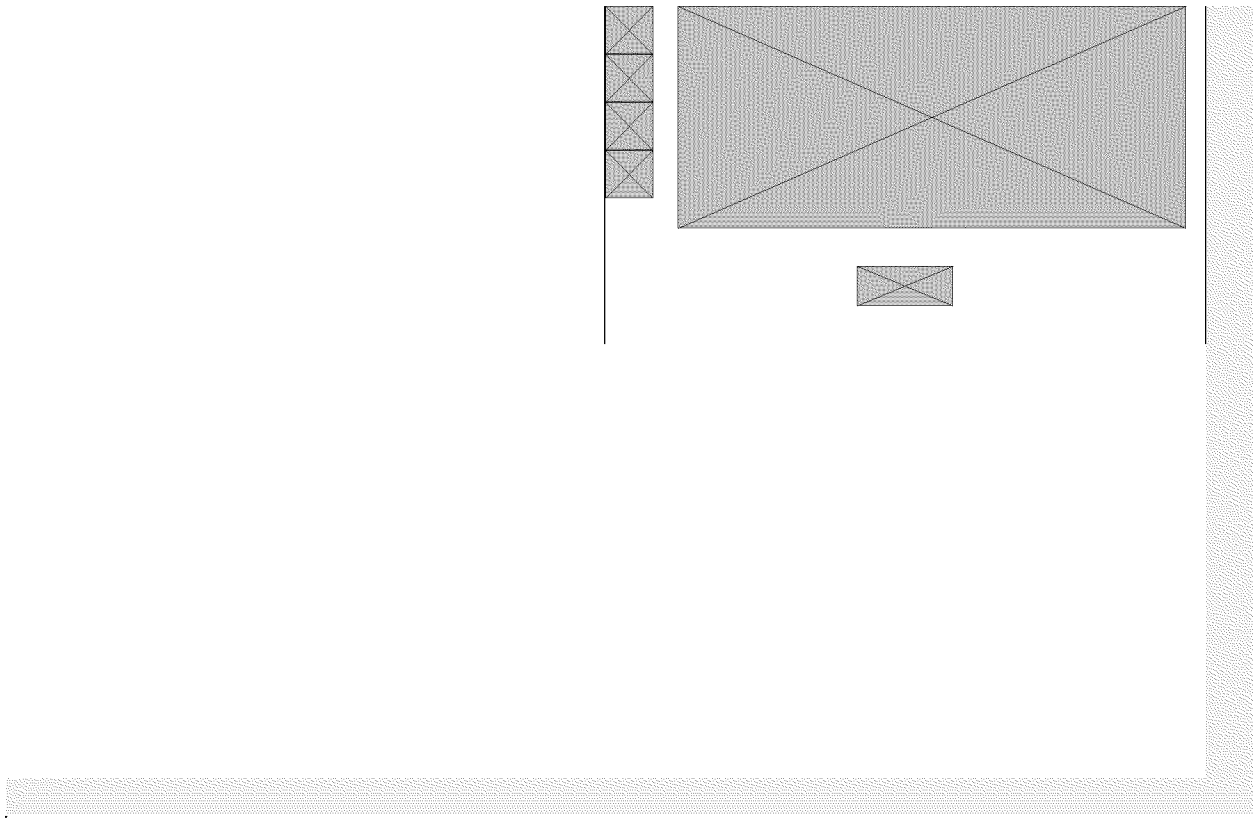
California Environmental Protection Agency
Air Resources Board

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Electric Drive Transportation Association
Sent: Sat 8/8/2015 12:41:13 AM
Subject: EV sales, next-gen Volt gets more range, Audi A3 e-tron gets a price, and other headlines of the week.









To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE Member Connection
Sent: Sun 8/9/2015 9:29:17 AM
Subject: Open Forum Digest for Saturday August 8, 2015

[redacted]

Open Forum

Post New Message via Email
Check out these discussions and more at http://connection.sae.org -- home of the new SAE Member Connection.

Aug 8, 2015

started 21 hours ago, James Plenzler (1 reply)

Finding Engineering jobs after 62

1I am now a retired engineer and long time SAE... James Plenzler

2Welcome to the club. I do find that there is a... Jerry Alcone

started yesterday, Barbara Fronczak (1

reply)

SAE Mobilty History Committee at AeroTech Congress and Exhibition

3 Looks like a great program! Jeremy Goddard

started 28 days ago, Samuel Shiber (12 replies)

Merged Car/Rail mass transportation system

4 David hello, I agree with you that merging... Samuel Shiber

5 GMs Bob Lutz, when he retired (Automotive News... Chris Macdermot

started one month ago, Jerry Alcone (37 replies)

Electronic Content in Modern Cars

6 Platinum-tipped spark plugs came into use in the... Robert Graban

7 Yea my Ford powered Austin Healy had

an access... Jerry Alcone

8 Bryan... Thanks for the discussion and... Edward Forrest

9 Jim I totally agree, the OEM parts are... Jerry Alcone

10 take it none of the posters have encountered... Greg Barnett

10 Great example I am sure the designer thought hey... Jerry Alcone

started one month ago, Lindsay Silver (63 replies)

Introduce yourself here.

12 Hi All, I am Aravind, currently pursuing my... Aravind Vasudevan

top next

1. Finding Engineering jobs after 62

Aug 8, 2015 7:13 AM

James Plenzler

I am now a retired engineer and long time SAE member. My former employer was purchased by a Chinese company which eliminated my position after a combined 27 years of service. Needless to say I was caught unprepared for being forced into an early retirement. I tried for almost a year to find new employment in my profession. I found many jobs I was more than capable of and had a genuine interest in. I sent out hundreds of resumes with only a few phone interviews and one on site interview. Needless the say the search was frustrating and demoralizing. There is no way to hide

your age on a resume and an on site interview becomes all revealing unless you want to dye your grey hair. Though there are laws against age discrimination there is no way to overcome the burden of being considered too old even though you are healthy and have the experience, knowledge and drive to continue on. My question to the membership is how can SAE help match senior level engineers with employers that are willing to take advantage of experienced engineers that are willing to continue to work in a technical capacity?

James Plenzler
Unemployed
Holland OH

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2. Re: Finding Engineering jobs after 62

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Jerry Alcone

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3. Re: SAE Mobilty History Committee at AeroTech Congress and Exhibition

Aug 8, 2015 8:32 PM

Jeremy Goddard

Looks like a great program!

Jeremy Goddard
Director Client Management
IDIADA Automotive Technology SA
Rochester Hills MI

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top previous next

4. Re: Merged Car/Rail mass transportation system

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-

Samuel Shiber

https://youtu.be/de6u20MKGcw

'

https://drive.google.com/file/d/0BzmJzVD

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5. Re: Merged Car/Rail mass transportation system

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-

Chris Macdermot

I

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6. Re: Electronic Content in Modern Cars

Reply All Email | Reply to Sender

Robert Graban

Reply All View Thread Recommend
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7. Re: Electronic Content in Modern Cars

Reply All Email | Reply to Sender

Jerry Alcone

Yea my Ford powered Austin Healy had an access plate in driver side toe box (firewall) to change rear plug on driver's side. Friends with big block Chevelles took their cars apart to change plugs.

Jerry Alcone
Retired
Albuquerque NM

Reply All View Thread Recommend Forward Flag as Inappropriate

Re: Electronic Content in Modern Cars

8.

Aug 8, 2015 8:37 AM

Edward Forrest

Bryan...

Thanks for the discussion and directions! I'll keep all of that stored for some (hopefully never) future use!

Edward Forrest
Retired-On-Hold
Marietta GA

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9. Re: Electronic Content in Modern Cars

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-

Jerry Alcone

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10 Re: Electronic Content in Modern Cars

Reply All Email | Reply to Sender

-

Greg Barnett

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11Re: Electronic Content in Modern Cars

Reply All Email | Reply to Sender

-

Jerry Alcone

Reply All **View Thread** **Recommend**
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top previous

12Re: Introduce yourself here.

Reply Reply

Aug 8, 2015 8:03 PM

Aravind Vasudevan

Hi All,

I am Aravind, currently pursuing my Masters in Mechanical Engineering at University of Texas at Dallas. After I completed my bachelors in India (Dayananda Sagar College of Engineering, Bangalore- Affiliated to Visvesvaraya Technological University) in the year 2013, I worked as a mechanical engineer in Engineering Services Unit of Infosys. During that time, I was part of the team working on Aircraft Certification for Client Airbus (worked on A350-900 - Leading Edge Components of the Wings). Later after

the completion of that project, I worked as Extern at Caterpillar, a client of Infosys. Worked in team performing Virtual Design Review and Audit for Assembly of Caterpillar Engines- (C15/18, C175, C3500's).

I am very eager to learn more about engines,advancements in Automotive and Aerospace Industry, always wanted to work in a Industry like CAT, Mercedes, and work in Engine Performance and Testing domain. I hope to learn a lot from you all and contribute to my level best.

All the Best!!

Aravind Vasudevan
Student @ Univ of Texas-Dallas
McKinney

TX-75070

Reply All View Thread Recommend Forward Flag as Inappropriate

You are subscribed to "Open Forum" as pidgeon.bill@epa.gov. To change your subscriptions, go to My Subscriptions. To unsubscribe from this community discussion, go to Unsubscribe.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/10/2015 12:44:52 PM
Subject: A.M. NEWSCAST: Tesla saving gas, burning cash | Caddy rethinks dealer spiffs | Novelis: Automakers testing stronger aluminum | Dodge, VW in 'healthy' ad rivalry

August 10, 2015

View in a Web browser | Forward to a colleague

Follow Jennifer

EDITOR'S NOTE: **We recently upgraded our email technology and our newsletters are now sent from a new email address.** ***To ensure you continue to receive this newsletter without issue, please add*** **autonews@crainalerts.com** *to your address book or safe senders list.* Click here for instructions.

TOP STORY: Tesla losing on Model S

Caddy rethinks spiffs »

Dueling Dodge, VW ads »

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customerservice@autonews.com

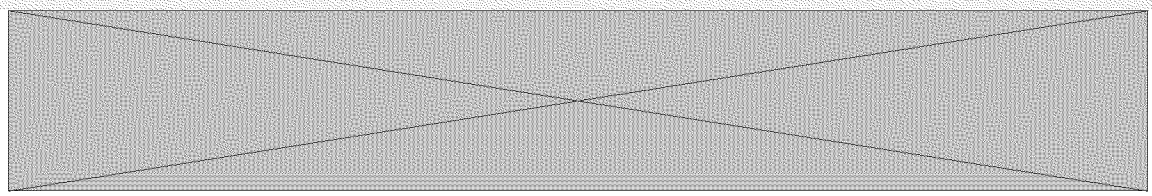
From: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Location: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Importance: Normal
Subject: Accepted: Ex. 7 - VW Off-Cycle Discussion
Start Date/Time: Thur 8/13/2015 1:00:00 PM
End Date/Time: Thur 8/13/2015 2:00:00 PM

Your request was accepted.

Sent by Microsoft Exchange Server 2016

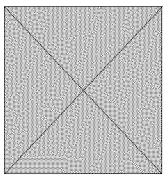
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Mon 8/10/2015 4:05:17 PM
Subject: Green Car Report Daily Headlines

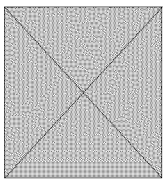
Email not displaying correctly? View it in your browser.



***Rate** your car and win an iPad.*

More ways to follow us:

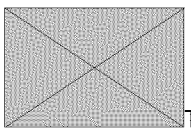




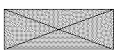
The latest from your friends at GCR:

Tesla Hacking Bounty, 2015 Toyota Prius C Crash Tests, VW Touareg Hybrid Dropped: Today's Car News

Aug 10, 2015 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

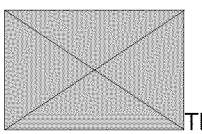
 Today, Tesla raises its hacking bounty to $10,000, the 2015 Toyota Prius C becomes an Insurance Institute for Highway Safety "Top Safety Pick," and the Volkswagen Touareg Hybrid is discontinued. All this and more on Green Car Reports. See what you may have missed last week with our Week in Reverse feature and video. Check out the video of a...

comments | read more



Car2Go Cutting Out Portland's Lower-Income, Racially Diverse Areas?

Aug 10, 2015 03:20 pm | feedback@highgearmedia.com (Bengt Halvorson)

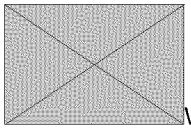
 The Daimler-owned car-sharing operation Car2Go recently announced that it was massively reducing its coverage area around Portland, Oregon. According to

the company, it's simply a smart business move, one that will keep cars in areas where they'll be more likely to be used frequently, and less likely to be 'stranded.' DON'T...

comments | read more

Electric-Car Mandates: Can't Meet 'Em, Makers Say, Whle Buyers 'Shrug' At Efficiency

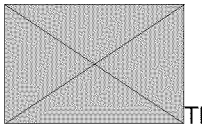
Aug 10, 2015 03:15 pm | feedback@highgearmedia.com (John Voelcker)

 With the approaching midterm review of the Corporate Average Fuel Economy rules coming up in the next two years, automakers and advocates are positioning themselves to lobby for changes to the rules. Auto companies are preparing to push aggressively not only to have those rules tweaked, relaxed, or delayed, but to do the same to California's...

comments | read more

Another Defunct Hybrid: 2016 Volkswagen Touareg SUV Loses Hybrid Option

Aug 10, 2015 02:45 pm | feedback@highgearmedia.com (John Voelcker)

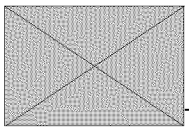
 This is a tough time for hybrids. Gas prices are down, the fuel economy of other vehicles is rising steadily, and the aged Toyota Prius is now six years old and on the verge of replacement. So perhaps it's not surprising that one maker quietly withdraws a hybrid from its lineup--and a low-volume one at that. The 2016 Volkswagen Touareg, the German...

comments | read more

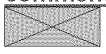
Tesla CTO Hikes Hacking Bounty To $10K (And Does A Shot)

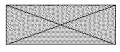
Aug 10, 2015 01:00 pm | feedback@highgearmedia.com

(Stephen Edelstein)

 Tesla Motors chief technology officer JB Straubel appeared at Def Con last week to thank the hackers who uncovered vulnerabilities in Model S electric car software. And, since he was a newbie at the annual hacker convention in Las Vegas, Straubel had to do more than shake hands. Organizers made him take a shot of Glenlivet scotch--a Def Con...

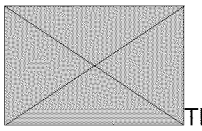
comments | read more





Latest Toyota Prius C Dubbed IIHS Top Safety Pick After Updates

Aug 10, 2015 12:45 pm | feedback@highgearmedia.com
(Stephen Edelstein)

 The 2015 Toyota Prius C hybrid subcompact has now become a "IIHS Top Safety Pick" among new cars, according to the Insurance Institute for Highway Safety. The crash-test ratings of the smallest Toyota hybrid improved after updates were made during the 2015 model year. These changes allowed the Prius C to go from a "poor" to an "acceptable" rating...

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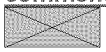
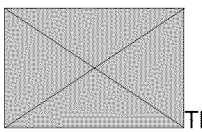
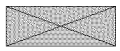


Test Pays BMW i3 Electric-Car Owners To Let Utility Delay Charging

Aug 10, 2015 12:30 pm | feedback@highgearmedia.com
(Stephen Edelstein)

 The rise of modern electric cars has brought concerns that their cumulative charging needs could have an increasing impact on electric power grids. Too many cars charging at once might simply overwhelm the ability of the infrastructure to handle it, electric-car critics say. While most studies and utility executives discount much of this fear, BMW...

comments | read more



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Update your profile

.

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Allen, Gregory (EEO)
Sent: Mon 8/10/2015 4:43:20 PM
Subject: Ex. 4 - CBI

Hello Jim,

As discussed --Today I uploaded the Ex. 4 - CBI testgroup.

As you know, this is an ongoing topic of discussion; and, although Ex. 4 - CBI has not been approved yet, we would appreciate your review of the application so that when the appropriate approvals are received we can expedite the certificate for this testgroup. As discussed, a cert request has not been generated yet for this testgroup, we will await the Ex. 4 - CBI pproval before we proceed with the cert request in Verify.

If you have any questions upon your review please feel free to contact us.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Snyder, Jim[Snyder.Jim@epa.gov]; McBryde, Dan[mcbryde.dan@epa.gov]; Smithson, Arlene[smithson.arlene@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Ex. 7

Ex. 7

Sent: Tue 8/11/2015 3:36:07 PM
Subject: RE: Ex. 4 - CBI Testing at EPA

Ex. 4 - CBI

To all:

In preparation for our telephone conference today at 1:00 p.m., I have attached a deck of slides. We will not have the ability to share graphics online. Therefore, please use these slides to follow along with the conversation.

Volkswagen Group of America, Inc. participants will join in the EEO Conference Room.

Best regards,

Ex. 7

Ex. 7
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Ex. 7

-----Original Appointment-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, August 05, 2015 4:42 PM
To: Snyder, Jim; McBryde, Dan; Smithson, Arlene; Wright, DavidA; Ex. 7

Ex. 7

Subject: Audi A3 e-tron PHEV Testing at EPA
When: Tuesday, August 11, 2015 1:00 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N125-ConfRoom/AA-OTAQ-OFFICE

Audi is hoping to get their vehicle scheduled for week of 8/31, although I haven't even seen the waiver request yet. Thought we should talk about lab testing details beforehand.

To all:

On August 4, 2015, representatives from Volkswagen Group of America, Inc. (VWGoA) had a brief telephone conversation with EPA, which included discussion of certification of [Ex. 4 - CBI] vehicle. At that time, VWGoA informed EPA that confirmatory testing of this concept could begin the week of August 31, 2015, (assuming that the agency will request confirmatory testing at the EPA laboratory). A definite test date will not be established until submission of the test request.

EPA requested a meeting to provide the agency with information regarding vehicle technology, operating characteristics, and information concerning test considerations. In light of the short lead-time before the projected test date, we prefer to conduct this meeting as soon as possible.

Based on my notes from the recent telephone conference, I have listed the following discussion points:

Ex. 4 - CBI

EPA informed VWGoA that [Ex. 4 - CBI] testing can be completed quickly (within two weeks), but since the process is a long string of testing, it can take a longer period if something goes wrong (up to six weeks). Thus, the importance of having this discussion. As stated, the discussion would be by telephone. Call-in details are shown below.

@Jim – Tuesday afternoon August 11, 2015, is the soonest our colleagues in Germany would be available. An alternate meeting time would need to be after that date. Please let me know if this is acceptable. I expect that you may forward this invitation to other EPA staff.

Best regards,

Ex. 7

Ex. 7
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Ex. 7

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Ex. 6

Forgot your dial-in PIN? | Help

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Tue 8/11/2015 6:58:47 PM
Subject: RE: additional questions regarding the PHEV Testing

Hello Jim:

I will forward these additional questions immediately. Thanks again to you and the other EPA staff for participating in the call.

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, August 11, 2015 2:56 PM
To: Kata, Leonard (EEO)
Subject: additional questions regarding the PHEV Testing

Len, there were some additional questions/comments brought up after the meeting. Please forward these to the appropriate persons.

Ex. 4 - CBI

4. Additionally, we all hope the testing goes smoothly. Detailed instructions and labeling on the vehicle for start procedure and testing procedure are always helpful and should be delivered with the vehicle. Photos of any indicators on the instrument panel to look for to confirm proper settings. Special fan placement? Seat belt req'd?

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 8/11/2015 8:28:56 PM
Subject: DAILY: Could BMW challenge Google's Alphabet? | Caddy seeks more 'autonomy' from GM | JLR spurns N.A. | Detroit 3 rev up for Dream Cruise

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GM workers strike in Brazil; Daimler cutting jobs

August 11, 2015

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BMW looks at whether Google's Alphabet infringes trademark rights

BMW today said it was looking into whether Google infringed any trademark rights after the Silicon Valley-based group set up a new company called Alphabet, which is also the name of a BMW subsidiary.

Cadillac seeks more 'autonomy' from GM, de Nysschen says

Cadillac will operate as a separate business unit from General Motors and report its own financial results within a few years, brand chief Johan de Nysschen said today.

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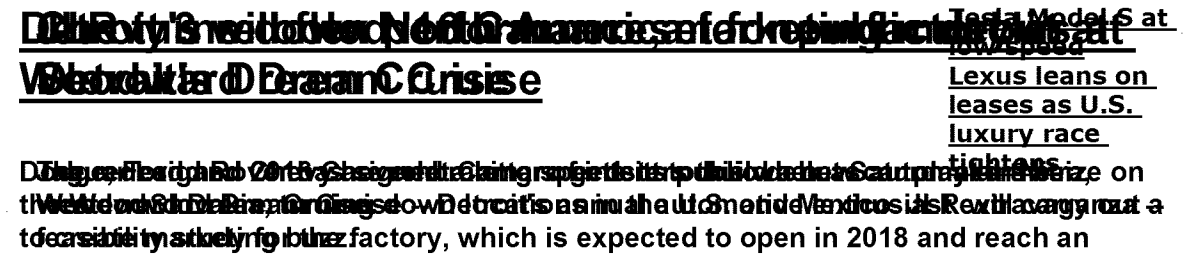
TrueCar CEO Scott Painter to step down by year end
In playful rivalry, Dodge pokes fun at Volkswagen Passat
FCA will free purchasing staff from cost restraints to focus on quality
Hackers turn off



Tesla Model S at low speed

Lexus leans on leases as U.S. luxury race tightens

annual output of up to 300,000 vehicles by 2025.

Mercedes R class production launched at AM General

BLOG: MIKE COLIAS

CTS-V sticker reflects shift in Cadillac pricing

Santander says U.S. regulators fault auto-loan practices

BLOG: DAVID UNDERCOFFLER

For Honda, technology isn't just for the young

China auto sales slump to 17-month low despite price cuts

Lear keeps investment plan unchanged in China

Ford hires exec who helped build up Buick in China

Ford to build Rangers in Nigeria as it eyes West Africa

Cars.com, LotLinx fill exec openings

Thai stamping supplier to expand in Michigan

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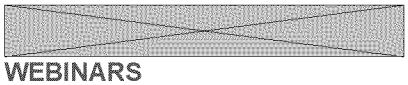

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To: Dunham, Jim (J.W.)[jdunham@ford.com]; Dunham, Scott (S.H.)[sdunham4@ford.com]; Ganss, David[GanssD@nrd.nissan-usa.com]; Ex. 6; Przesmitzki, Steven[STEVEN.PRZESMITZKI@ARAMCOSERVICES.COM]
From: Snyder, Jim
Sent: Tue 8/11/2015 8:30:00 PM
Subject: RE: Bronco pulling trailer

The Apache was designed to be pulled by a VW Beetle. I pulled it all over the east coast with a VW GTI no problem. GLH even easier, no more trips in a car w/o A/C.

Non-Responsive

Non-Responsive

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 8/12/2015 10:07:19 AM
Subject: voice message for Lamborghini

Thanks for the voice message Dave, Ex. 4 - CBI

Ex. 4 - CBI

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Wright, DavidA[Wright.DavidA@epa.gov]; McBryde, Dan[mcbryde.dan@epa.gov]; Smithson, Arlene[smithson.arlene@epa.gov]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Sigelko, Jenny (EEO)[Jenny.Sigelko@vw.com]; Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Kata, Leonard (EEO)
Sent: Wed 8/12/2015 3:08:35 PM
Subject: RE: additional questions regarding the PHEV Testing
Ex. 4 - CBI

Hello Jim:

Attached are the Volkswagen responses to the questions raised during and after our conference call of Aug. 11, 2015, Ex. 4 - CBI If any additional clarification is needed, do not hesitate to contact me.

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, August 11, 2015 2:56 PM
To: Kata, Leonard (EEO)
Subject: additional questions regarding the PHEV Testing

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Ex. 4 - CBI

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Jim Snyder
Light-Duty Vehicle Group
Compliance Division

United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

VOLKSWAGEN
GROUP OF AMERICA

Plug-in Hybrid (A3 eTron) follow up questions EPA – Volkswagen meeting 08-11-2015

EPA Question:
What timing is Volkswagen planning for testing the Audi A3 etron at EPA?

VW Answer:
Our target is to have the vehicle tested at the end of September (Calender Week 40)

Ex. 4 - CBI

Ex. 4 - CBI

Plug-in Hybrid (A3 eTron) follow up questions EPA – Volkswagen meeting 08-11-2015

Ex. 4 - CBI

EPA Question:
Detailed instructions and labeling on the vehicle for start procedure and testing procedure are always helpful and should be delivered with the vehicle. Photos of any indicators on the instrument panel to look for to confirm proper settings. Special fan placement? Seat belt req'd?

VW Answer:
We will deliver a booklet with the vehicle we will bring to EPA.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 8/12/2015 8:14:55 PM
Subject: DAILY: How old folks influence the U.S. auto industry | Trump bashes Ford | Takata to promote airbag recalls | TrueCar says antitrust probe over | Hyundai's 'Vision G' concept

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August 12, 2015

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How the elderly became the future of the U.S. auto industry

American seniors have never been healthier or wealthier. At the same time, cars have never been crammed with more features to safeguard drivers with fuzzy vision, slow reactions, and stiff necks. This might just be the first time ever that one of the most promising demographics for U.S.

Donald Trump bashes Ford in Mich. speech

Republican presidential candidate Donald Trump came to the home state of the auto industry and attacked Ford for building factories in Mexico. And the Michigan faithful in attendance sided with the outspoken mogul.

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Hyundai says it's ready to drive into Oscar de la Renta; Stock in Wisconsin-based Oshkosh Corp. takes a big hit; Tesla's cash burn; Lexus' lights; Mazda's baby carriage

Hyundai has built its luxury-car lineup around sedans such as the Genesis and Equus. On Tuesday, by unveiling a slinky coupe concept with self-opening doors, Hyundai seems to be aiming for the heart of the luxury market, which is getting crowded as more companies chase the growing number of affluent consumers around the globe. Tesla burns cash, loses more than $1 billion on car sales; Picking up the pieces at TrueCar

Tesla's cash burn; Lexus' lights; Mazda's baby carriage

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Tesla burns cash, loses more than $1 billion on car sales; Picking up the pieces at TrueCar

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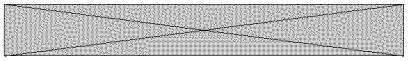

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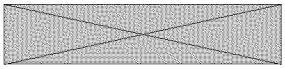

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Sent: Wed 8/12/2015 8:15:27 PM
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Tesla Motors Inc. won over consumers and critics alike with its Model X crossover, which debuted to rave reviews and long waiting lists. Lexus has launched a trio of LexuEVS car lights, which are designed to help drivers see around corners.

Mazda's Kiyoshi Fujiwara has a vision for the automaker's future: a baby carriage.

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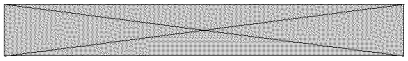

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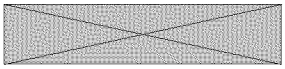

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 8/13/2015 12:50:53 PM
Subject: A.M. NEWSCAST: Fields emailed Trump about Mexico - report | Takata's team of rivals | Audi EV project | Dodge's game-changer | Power of seniors | Toyota exec's VW story

August 13, 2015

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To: richard.thomas@vw.com[richard.thomas@vw.com]
From: Good, David
Sent: Thur 8/13/2015 7:32:07 PM
Subject: 2016 FE Label data attached
VW_Group_2016 FE Guide-all rel dates-no-sales-8-12-2015.xlsx

Richard,

Here you go—it has a tab for the e Golf.

Dave

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 8/13/2015 8:32:53 PM
Subject: DAILY: Thousands of vehicles destroyed in China explosion | Which automaker is next for Trump's wrath? | Tesla strikes while the iron's hot | Takata's competitors gain from recall crisis

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Thousands of vehicles burned in fatal blast at China port

Thousands of vehicles made by at least four automakers were destroyed by a fiery factory explosion in the Chinese city of Tianjin, Chinese media reported. About 50 deaths and 700 injuries were reported. VW, Hyundai-Kia, Renault, and Toyota all lost cars in the explosion, reports said.

After ripping Ford, Trump says other automakers building in Mexico are next

Donald Trump told a Detroit newspaper that he plans to broaden his recent criticism of Ford to include other automakers that are expanding production in Mexico instead of the U.S.

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BLOG: CABE NELSON

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Picking up the pieces at TrueCar

BLOG: JAMIE LaREAU

Sales legend rings up with advice on cars, marriage, cars

Tesla seeks to raise about $500 million through share sale

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Fiat heir shows his grandfather's dealmaking flair

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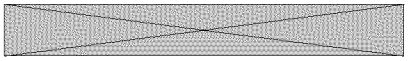

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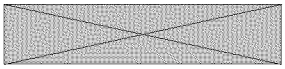

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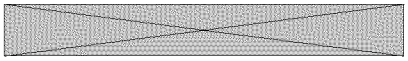

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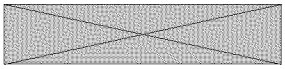

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To: Brett Smith[bsmith@CARGROUP.ORG]
From: Grundler, Christopher
Sent: Fri 8/14/2015 1:01:20 AM
Subject: Re: Advanced Powertrain Forum list of attendees

Thank you for reducing your carbon footprint!

Regards,

Chris

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Aug 13, 2015, at 9:50 AM, Brett Smith <bsmith@CARGROUP.ORG> wrote:

> Been on dawn patrol all week. After several crashes, it is clear...I am getting too old for this. Need to take up something more relaxing.. Maybe I'll go sailing.
>
> Brett Smith
> 734-255-0884
>
> On Aug 12, 2015, at 8:31 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> Thanks Brett. Hope you will be skiing in Indiana soon
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)
>
> On Aug 12, 2015, at 7:05 PM, Brett Smith <bsmith@CARGROUP.ORG> wrote:
>
> > Chris, thanks so much for joining our program this year. Greg and I think it was vital to have you as a part of the discussions. Your participation is much appreciated. It was also great that you were able to attend some of the other sessions. There is certainly going to be even more to discuss next year!
> >
> > I have cc'ed my associate Shaun. He will make sure your presentation is up tomorrow.

Brett Smith
734-255-0884

On Aug 12, 2015, at 6:03 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

Hi Brett.

I really enjoyed my time in TC this year, and catching up with you. I hope to see you next year, same time, same place. In the meantime, I have received numerous requests for my presentation. I gave someone permission to post it, but am told it is not on your website. If you could look into this I'd appreciate it (so I don't have to send out numerous times)

thanks

Chris

From: Brett Smith [mailto:bsmith@CARGROUP.ORG]
Sent: Wednesday, July 29, 2015 10:33 AM
To: kregg.wiggins@continental-corporation.com; pamela.fletcher@gm.com; Grundler, Christopher; justin.ward@tema.toyota.com; joerg.sommer@vw.com
Cc: Moran, Robin; Ginivan, Jeannine (Jeannine.Ginivan@vw.com); Stewart, Gwen; Virginia.Colombo@continental-corporation.com; kevin.m.kelly@gm.com; dagmar.amudhanar@vw.com
Subject: Advanced Powertrain Forum list of attendees

Greetings,

I have attached the list of attendees for the **Advanced Powertrain Session at the CAR Management Briefing Seminars**. We have approximately 360 people registered for the session. The list is comprised of a remarkably diverse group of industry leaders, and should make for a great morning. I hope you will be able to

connect with many of them through your stay.

This list is provided is not formatted, and not for publication. We provide it for your reference only.

Again, thanks for participating. Please contact me if you have any questions. I look forward to seeing you next week, and safe travels to Traverse City.

Brett Smith
Center for Automotive Research

3005 Boardwalk, Suite 200

Ann Arbor, Michigan 48108

Tel. 734-929-0491
Mobile: 734-255-0884

Find us on the web: Website | Facebook |

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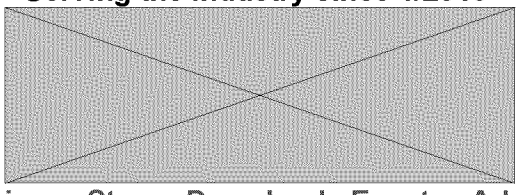
To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Shmuel De Leon Energy
Sent: Fri 8/14/2015 2:27:58 AM
Subject: Shmuel De-Leon Energy Storage Newsletter - 16/8/2015 - No. 293

Shmuel De-Leon Batteries, Super-capacitors, Fuel cells & EV`s Weekly Newsletter

August 16th, 2015, No. 293
Sent to more than 125,000 industry members
Serving the industry since 1/2010



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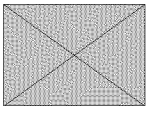
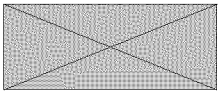
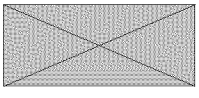
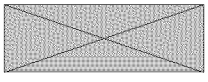
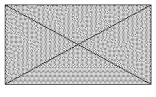






Battery News

London hybrid buses suffer Li-ion battery failures

China Pb-A smelting face lost profits

US startup looks east to open Li-ion plant

Compans merger aims to reshape Lithium mining development

Voltabox opens Li-ion plant in US

3M and LG Chem enter into NMC patent license agreements; cathode materials for Li-ion batteries

ILL team uses neutron scattering to elucidate structure and dynamics of superionic conductor Li4C60; potential for batteries and fuel cells

MIT/Tsinghua high-rate aluminum yolk-shell nanoparticle anode for Li-ion battery with long cycle life and high capacityMIT/Tsinghua high-rate aluminum yolk-shell nanoparticle anode for Li-ion battery with long cycle life and high capacity

New solid-state Li-O2 battery with integrated electrolyte and cathode structure boosts performance

High-performance Li-ion anode from molybdenum disulfide/nitrogen-doped graphene

PATHION Announces International Licensing Opportunity for Its Advanced Electrolyte

2016 Audi A3 Sportback e-tron PHEV starting at $37,900 in US

2016 Chevrolet Volt EPA-rated at 53 miles all-electric range

BYD and Alexander Dennis partner on new $30M deal for single-deck electric buses in London

CarCharging Gets New CEO - Former Schneider Electric Exec Named As CEO Of CarCharging

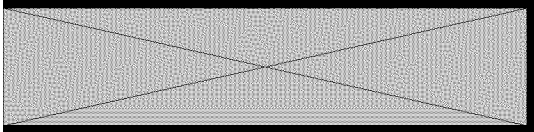
Tesla lowers 2015 delivery prediction, sort of

New Smart ED not coming to US until 2017

Apple and BMW have been exploring partnerships on cars

Leo Motors Launches Major Joint Venture In China

BMW launches BMW i ChargeForward pilot in SF Bay Area



www.arbin.com
antony.p@arbin.com

UniEnergy Technologies Announces Commissioning of Largest Capacity Flow Battery in North America and Europe

Toshiba Completes Testing 1MW-1MWh Battery Energy Storage System for Italian Transmission System Operator

Saft supplies Haramain back-up batteries

RRC delivers battery storage to district town of Homburg

J.V. Manufacturing rides wave of fuel cell expansion

Vodafone adopts hydrogen fuel cells to dodge African outages

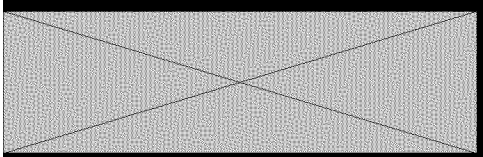
Skeleton introduces 24V ultracap Engine Start Module for trucks

Shmuel De Leon Energy is looking for partners in Finland, Sweden, Canada, Japan, Korea, China to host and partner on its

The Batteries, Fuel Cells, Super Capacitors & EV Seminar

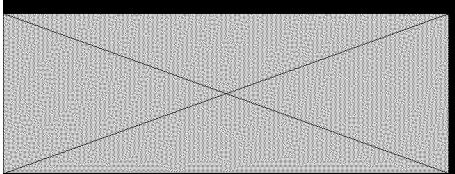
Seminars Web Site

Schedule	Location	Partner Program	Registration
27/8/2015	Oslo, Norway		



Taking place August 26-28, 2015, in SNIEC Shanghai, the 7th China (Shanghai) International Battery Industry Fair (CNIBF2015) will be the largest battery show in China this year. More than 600 enterprises from 35 plus countries and regions will participate in this show. The exhibiting area is up to 35,000m², and more than 80 purchasing groups, 30,000 buyers will ensure the chance to develop their business throughout China. Please contact us for more information Email:cnibf@zhenweiexpo.com Tel: +86 20 83507829

www.cnibf.net



BATTERY OSAKA, September 3nd-4th, 2015, is a specialised exhibition newly launched in 2014 for manufacturing and R&D of rechargeable batteries. All kinds of materials, manufacturing technologies, inspection/analysis equipment related to rechargeable batteries will be gathering. For exhibiting and visiting inquiries: bj-o@reedexpo.co.jp

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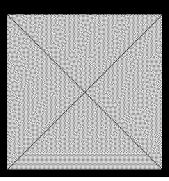
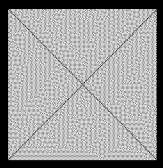


4th International Secondary Lead Conference, 7-8 September 2015, Geneva

Grand @ CentralWorld and Bangkok Convention Centre.

This biennial Conference is Asia's leading exchange for secondary lead producers, suppliers, markets and lead-acid battery recyclers. The Conference will provide a remarkable opportunity for all segments of the industry to meet and discuss the many topics affecting the industry. Emphasis will also be placed on the market conditions and what role secondary plays in the overall lead market. wwwsecondaryleadconference.com



16th Asian Battery Conference and Exhibition, 8 - 11 September 2015, Centara Grand @ CentralWorld and Bangkok Convention Centre. 16ABC will see the largest and most important assembly of battery industry experts gather in Bangkok for what is the premier lead battery industry event in Asia. Participate in a sparked-up show with an interactive and lively exhibition, a program that showcases presentations from global experts in battery technology, science and business and ramped-up social events. www.asianbatteryconference.com

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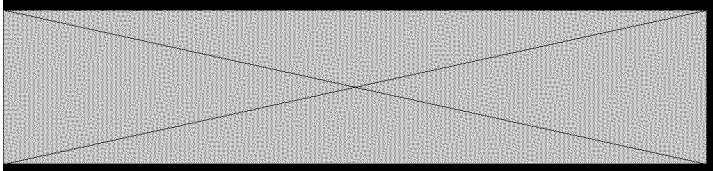
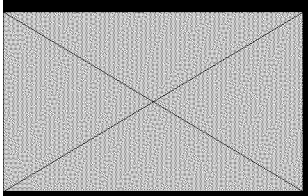
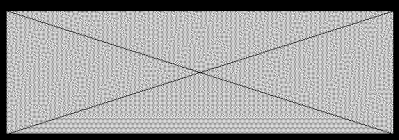
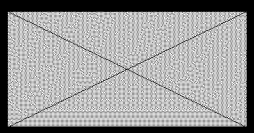


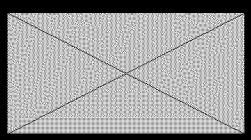
Taking place September 15-17, 2015, in Novi, Detroit, Michigan, The Battery Show 2015 is the premier showcase of the latest advances in battery technology. The exhibition hall offers a platform to launch new products, make new contacts and maintain existing relationships. With more qualified buyers and decision makers than any other event in North America, The Battery Show 2015 is the key to unlocking your future business opportunities.

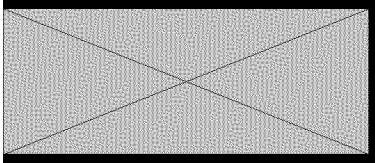


Join the only technical conference where the automotive and renewable industries come together to ensure business growth. With the growth of the electric vehicles' market and the shift to cleaner energy, batteries have become the common denominator for the automotive and renewable industry. Take this unique opportunity to meet experts from around the world. Visit the website for more information.

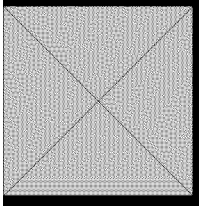




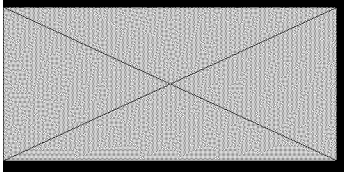




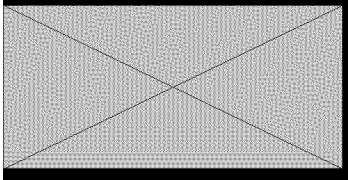
The 2nd edition of the World Electric & Hybrid Boat Summit will take place from 30th September till 2nd October 2015 in Amsterdam, followed by a study tour in Friesland. PlugBoat aims at providing a premier & high quality global platform to foster exchange of views and development of synergies between players in the field of electric & hybrid boats for sport and inland water transportation. Info



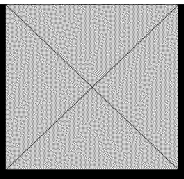
"Battery Shanghai"



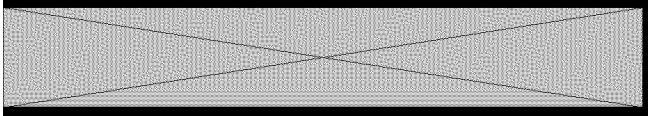
Batteries 2015 is taking place 7-9 October 2015, Nice France. Christophe Pillot will be also handling his 2nd edition of his tutorial on "The Rechargeable Battery Market: value chain and main trends 2014 - 2025" on October 6th 2015. Batteries 2015 will include 3 days of technical sessions with 70 high level speakers, poster sessions, networking cocktail & dinner and a 2000 m² exhibit area. Contact : Sonia Jouneau - Tel : +33 1 41 34 21 75 - Email : sjouneau@lepublicsysteme.fr



www.interbattery.or.kr



This year, the World Mobility Conference takes place alongside the eCarTec Munich 2015 and MATERIALICA 2015 trade fairs from October 20 - 22, 2015 (at Messe München). On 22 October, 2015 from 9:30 am - 05:00 pm the conference agenda will include a session about Electric Vehicle Batteries with 12 leading speakers on the topics of electric vehicles and electric vehicle batteries. It will be moderated by Mr. Shmuel De Leon from Shmuel De Leon Energy. Further information available at



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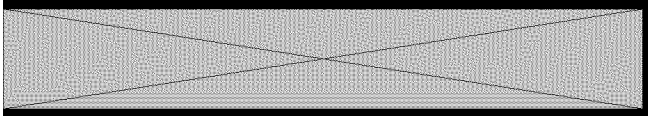
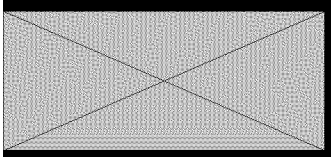
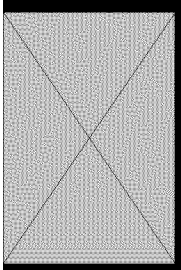
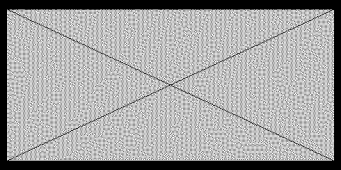


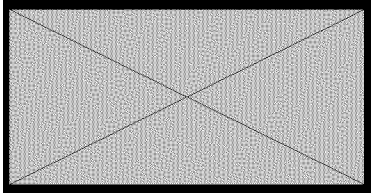


Fuel Cell Seminar and Energy Exposition - November 16-19, 2015



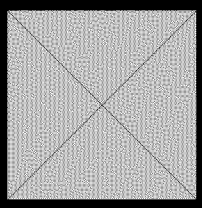


ees℠ is the international exhibition series for batteries, energy storage systems and innovative production. ees Europe is Europe's largest energy storage event taking place in Munich in conjunction with InterSolar Europe on June 10-12, the world's leading exhibition for the solar industry. Furthermore ees℠ North America and ees India are highlighted as Special Exhibitions at the InterSolar events in San Francisco on July 14-16 and Mumbai on November 18-20 - the major platforms for energy storage technologies reshaping the energy sector.

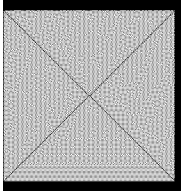


The 4th edition of the European Electric & Hybrid Vehicle Congress will take place from 1st to 4th December 2015 in Brussels. With over 200 presentations to be made, EEVC 2014 strengthens its position as global platform to foster exchange of views between the researchers, the industry, the authorities, the end users and the NGO's in the field of eMobility.

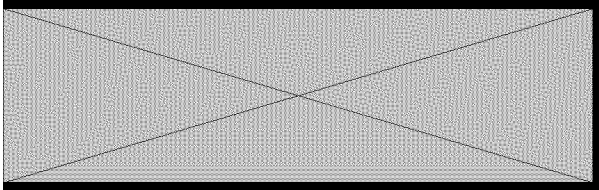
Info: www.eevc.eu ,



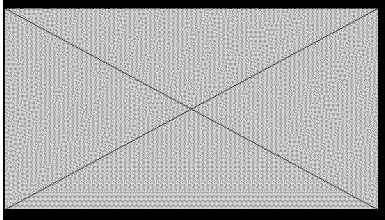
Energy Storage India (ESI) is the leading conference and expo addressing the need for energy storage and microgrid solutions in India. The 3rd International Conference & Exhibition, which is scheduled from December 08 - 09, 2015 along with a Pre-Conference workshop on December 07, 2015 at India Habitat Centre, New Delhi. The 3-day conference program would be concentrating on interactive markets with the topic "New Era for India's Energy Infrastructure through Energy Storage and Microgrids". [...]



www.europeanfuelcell.it

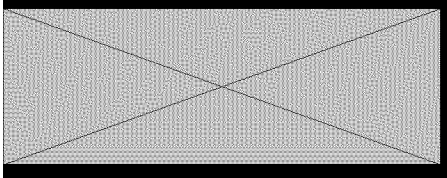


www.energy-storage-symposium.com or call +1-815-310-3343 for full info



jgreenberger@naatbatt.org

http://naatbatt.org/naatbatt-annual-conference



Shmuel De-Leon Energy, Ltd. Mazal-Arie 10, Hod-Hasharon, 45309 Israel

http://www.sdle.co.il http://www.batteriesdatabase.com

shmuel@sdle.co.il, Tel/Fax: 972-77-5010792

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Shmuel De Leon Energy | Mazal-Arie 10 | Hod-Hasharon | 45309 | Israel

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 8/14/2015 7:31:53 PM
Subject: P.M. NEWSCAST: Stein: From Motown to Monterey - two visions of 2065 | Toyota workers hurt in China blasts | Tesla raises stock offering | VW recall | NASCAR star 'fesses up

August 14, 2015

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 8/14/2015 8:52:53 PM
Subject: DAILY: Apple eyes proving ground for self-driving cars | FCA union workers set strike vote | VW hid security flaw for 2 years | GM boosts SUV, truck output

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Toyota says more than 50 staff injured in China port explosions

August 14, 2015

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Apple eyes proving grounds for self-driving car, report says

Apple is looking into using a former military base northeast of San Francisco as a high-security proving ground for autonomous vehicles it is developing, according to an online report by The Guardian, a British newspaper.

FCA's union workers set strike authorization vote for Aug. 20

The UAW has scheduled a strike authorization vote on Aug. 20 for its 37,000 members at Fiat Chrysler Automobiles.

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GM to boost production of big SUVs, pickups

BLOG: DAVE GUILFORD

Another car-hack issue to ponder: In-car eavesdropping

Thousands of cars from a host of manufacturers have spent years at risk of electronic car hacking, according to expert research that Volkswagen has spent two years trying to suppress in the courts.

We have all seen the stories about hackers taking control of connected cars, but could a hacker turn on a voice link without your knowledge and listen to your conversations?

Toyota says more than 50 staff injured in China port explosions

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Special edition BMW M4 concept to debut at Pebble Beach

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Tesla note irks some Model S owners

FCA aims to keep momentum after Ferrari spinoff

Mercedes' China surge pushes it past BMW, Audi in July

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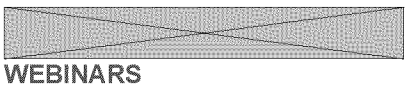

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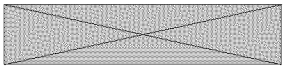

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 8/14/2015 8:53:10 PM
Subject: DAILY: Apple eyes proving ground for self-driving cars | FCA union workers set strike vote | VW hid security flaw for 2 years | GM boosts SUV, truck output

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Toyota says more than 50 staff injured in China port explosions

August 14, 2015

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Apple eyes proving grounds for self-driving car, report says

Apple is looking into using a former military base northeast of San Francisco as a high-security proving ground for autonomous vehicles it is developing, according to an online report by The Guardian, a British newspaper.

FCA's union workers set strike authorization vote for Aug. 20

The UAW has scheduled a strike authorization vote on Aug. 20 for its 37,000 members at Fiat Chrysler Automobiles.

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Donald Trump bashes Ford in Mich. speech
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GM to boost production of big SUVs, pickups

BY: DAVE GUILFORD

General Motors is boosting production of its highly profitable large SUVs and trucks to a pace that could result in 48,000 to 60,000 additional vehicles for the 2016 model year, a move that comes as the automaker faces a shortage of full-size pickups.

Another car-hack issue to ponder: In-car eavesdropping

Thousands of cars from a host of manufacturers have spent years at risk of electronic car hacking according to expert research that Volkswagen has spent two years trying to suppress in the courts.

We have all seen the stories in the news about hackers taking control of connected cars, but could a hacker turn on a voice link without your knowledge and listen to your conversations?

Toyota says more than 50 staff injured in China port explosions

Mercedes C-class coupe to take on BMW 4 series, Audi A5

Lexus fine-tunes LX, GS in return to luxury roots

Special edition BMW M4 concept to debut at Pebble Beach

GM recalls 2010 Cobalts for wiring flaw

VW recalls 420,000 cars in the U.S. to fix airbags

Tesla raises share offering to $642.5 million

Tesla note irks some Model S owners

FCA aims to keep momentum after Ferrari spinoff

Mercedes' China surge pushes it past BMW, Audi in July

Delphi adds tech executive to its board

Prosecutors drop case against Porsche board

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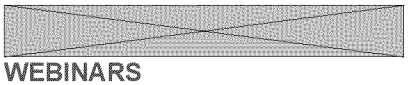

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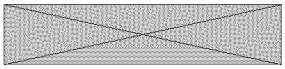

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To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Mon 8/17/2015 7:39:17 PM
Subject: Volkswagen SIL Shift Speed Request.

Hello Jim:

As we had discussed previously, would you be able to send a written response to our request for

Ex. 4 - CBI

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Mon 8/17/2015 7:55:46 PM
Subject: Volkswagen Test Vehicle Engineering Report

Ex. 4 - CBI

Hello Jim,

Please see the attached engineering report for Vehicle ID: **Ex. 4 - CBI** Automatic)

This FEDV is scheduled to be delivered to EPA on August 24,2015, with a scheduled test date of August 26,2015.

The attached report describes an issue that occurred during certification testing, as well as the steps that were taken to resolve the issue. We expect no influence on emissions or fuel economy with this repair.

The report was also uploaded electronically to Verify. Please let us know if you have any questions/concerns with the report.

Thank You and Best Regards,

Greg Allen

VWGoA EEO

(248)754-4209

VOLKSWAGEN

GROUP OF AMERICA

Mr. Jim Snyder
Compliance and Innovative Strategies Division
Office of Mobile Sources
U. S. Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105

Leonard W. Kata Name
Manager Title
EEO Department
248-754-4204 Phone
248-754-4207 Fax
leonard.kata@vw.com E-Mail

August 13, 2015 Date

Subject: MY 2016 Volkswagen Engineering Report for test vehicle: Ex. 4 - CBI

Dear Mr. Snyder,

We submit, with this letter, the engineering report for the Volkswagen Certification

Ex. 4 - CBI

Ex. 4 - CBI

VOLKSWAGEN GROUP OF AMERICA, INC.
3800 HAMLIN ROAD
AUBURN HILLS, MI 48326
PHONE +1 248 754 5000

If you have any questions with regard to this information please contact our office in Auburn Hills at (248) 754-4219.

Sincerely,

Leonard W. Kata
Volkswagen Group of America, Inc.

Engineering and Environmental Office

Enclosure(s)

Engineering Report

Report Number: Ex. 4 - CBI

Test Group:
Effected Vehicle:

Problem:

Solution: Ex. 4 - CBI

Comments: Total vehicle mileage remains within the required specifications for certification testing. No additional testing was performed after the transmission repair, and no change in emissions/fuel economy is expected.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/17/2015 8:24:00 PM
Subject: DAILY: VW faces NHTSA probe after Takata airbag incident | Toyota loses China output | Infiniti enters 2.0-turbo fight | Updated Tacoma gets timing right

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VW faces NHTSA probe after Takata airbag incident

The National Highway Traffic Safety Administration is widening its Takata airbag probe after a Takata side airbag in a Volkswagen SUV ruptured in June.

Toyota loses China output as plants stay shut on Tianjin blasts

Toyota will lose its biggest source of car production within China for at least three days, as automakers struggle to assess the damage of last week's explosions in the port city of Tianjin.

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Infiniti prepares to enter 2.0-turbo fight

Infiniti will be able to stand nose-to-nose with some of its bigger competitors in five months with one of the luxury segment's hottest features -- a small turbo-charged engine.

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- Joe Latham, Chevrolet Dealer Combination

See why we're different.

Updated Tacoma gets timing right

BY RICHARD JOHNSON

Toyota's all-new 2016 Tacoma couldn't be hitting the market at a better time, as consumers have rediscovered their appetite for compact trucks. So where are these buyers coming from?

Why Mazda's Jim O'Sullivan is big on new subcompact CX-3

Classic Car Week on the Monterey Peninsula is always extra-special for Mazda, what with the Mazda Raceway at Laguna Seca being a main attraction.

Ford headlight failures and wrecks draw second U.S. probe

Millennials are developing parents' taste for Jaguars, Cadillacs

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Henrik Fisker designs exotic convertible for Galpin

Shelby to market 50 Daytona re-creations

Ferraris lead the pack at $390 million Pebble Beach car auctions

Pebble Beach culminates auto-mania week

Tesla stock price predicted to nearly double, Morgan Stanley says

Germany's Mann + Hummel to buy Affinia's filter unit for $513 million

Former Porsche communications chief charged with aiding market manipulation

Lear buys technology from California automotive app developer

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Autonomous cars will crash and be hacked ... and that's OK

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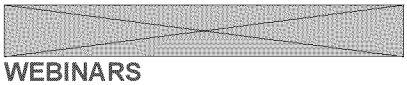

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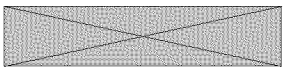

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 8/18/2015 12:57:59 PM
Subject: A.M. NEWSCAST: Tesla the next Uber? | VW in Takata-airbag probe | Redesigned Tacoma ready for hot midsize-pickup market | Change for Toyota in Russia | Hyundai agency move

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Tue 8/18/2015 12:58:17 PM
Subject: A.M. NEWSCAST: Tesla the next Uber? | VW in Takata-airbag probe | Redesigned Tacoma ready for hot midsize-pickup market | Change for Toyota in Russia | Hyundai agency move

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To: OTAQ[OTAQ@epa.gov]; Ex. 6
Cc: Wehrly, Linc[wehrly.linc@epa.gov]
From: Ball, Joel
Sent: Tue 8/18/2015 1:58:15 PM
Subject: RE: Your EPA Inquiry - Problems with VW's Diesel Particulate Filter

Hello Mr. Dunn,

Thank you for contacting EPA regarding problems with VW's Diesel Particulate Filters and for bringing this to our attention. EPA regulations require that the emissions systems be designed to be durable for the full useful life of the vehicle (10 years or 120,000 miles) however, they do not require DPF to be removable separately from the rest of the exhaust system. We cannot require a recall based solely on the serviceability of the DPF.

EPA has the authority to require a recall if a substantial number of vehicles fail to comply with the emissions regulations within the useful life. We are looking into the rate of DFP failures on VW vehicles. If we determine that there have been a substantial number of failures, there may be a recall in the future. I recommend you keep the receipts for any repairs you have done. If there is a recall that covers your vehicle, you may be eligible for reimbursement.

I hope this information is helpful,

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
ball.joel@epa.gov

From: Jennifer France [mailto:France.Jennifer@epamail.epa.gov] **On Behalf Of** OTAQ@epa.gov
Sent: Thursday, August 13, 2015 1:47 PM
To: Ball, Joel
Cc: Wehrly, Linc
Subject: Your EPA Inquiry - Problems with VW's Diesel Particulate Filter

allenjdunn---08/12/2015 06:47:33 PM---UserWord human

Ex. 6

To: OTAQ@EPA,
Date: 08/12/2015 06:47 PM
Subject: Your EPA Inquiry - (012184731 Ex. 6 - Diesel Particulate Filter - OTAQ Web

---

UserWord
human
Word
human
comments
Hello,

I am hoping I can enlist your support and assistance in an issue I am having with Volkswagen of America. I have a 2012 Jetta Sportwagen TDI with 120,000 miles on the odometer.

My Diesel Particulate Filter is now at it's end of life and requires replacement. Volkswagen's original design requires an entire exhaust system replacement to replace the DPF (Diesel Particulate FIlter).

Sadly, the replacement exhaust system, which has a new design that allows replacement of the DPF will cost me $3,000.00.

In my opinion, this is a design flaw in the original exhaust system that does not allow the filter to be replaced.

The advise from my local VW dealership is to not bother replacing the DPF. This statement alone infuriates me as I am concerned about our environment. Hence the reason I am driving a very fuel efficient clean diesel automobile.

Is there any way the EPA can assist in putting pressure on VW to recall the defective designed exhaust system as it is not conducive for replacing the DPF and frankly will result in the vehicle operating without proper emissions.

Your kind assistance and guidance would be most appreciated.

Best Regards,

Allen J Dunn
email
Ex. 6
name
Allen Dunn
org

referrer
http://www.epa.gov/otaq/oms-cmt.htm
ssubject
Diesel Particulate Filter

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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Schuetze, Michael (N/EA-521)[Michael.Schuetze@audi.de]; Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Tue 8/18/2015 3:02:16 PM
Subject: VW Group Request for Approval

Ex. 4 - CBI

Hello Jim,

Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Ball, Joel[ball.joel@epa.gov]
From: Ex. 6
Sent: Tue 8/18/2015 3:30:45 PM
Subject: RE: Your EPA Inquiry - Problems with VW's Diesel Particulate Filter

Mr. Ball,
Thank you very much for the clarification.

Best Regards,

Ex. 6

From: ball.joel@epa.gov
To: Ex. 6
Subject: RE: Your EPA Inquiry - Problems with VW's Diesel Particulate Filter
Date: Tue, 18 Aug 2015 15:24:43 +0000

Hello Ex. 6

The useful life is defined as 10 years or 120,000 miles, however, the Federal emissions warranty period for the DPF is 8 year or 80,000 miles. The following web page provides more information regarding the federal emissions warranty requirements: www.epa.gov/obd/pubs/420f09048.pdf

Best regards,

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4238
ball.joel@epa.gov

From: Ex. 6
Sent: Tuesday, August 18, 2015 10:01 AM
To: Ball, Joel
Subject: RE: Your EPA Inquiry - Problems with VW's Diesel Particulate Filter

Dear Mr. Ball,

Thank you very much for your quick reply. Just one more clarifying point if possible. VW's warranty on the emissions is only 85,000 miles. Isn't that inconsistent with your statement regarding the 10 years, 120,000 miles?

I just want to be clear,

Thank you,

Ex. 6

From: ball.joel@epa.gov
To: OTAQ@epa.gov; **Ex. 6**
CC: wehrly.linc@epa.gov
Subject: RE: Your EPA Inquiry - Problems with VW's Diesel Particulate Filter
Date: Tue, 18 Aug 2015 13:58:15 +0000

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Joel Ball
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Compliance Division
United States Environmental Protection Agency
ball.joel@epa.gov

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To: Ball, Joel
Cc: Wehrly, Linc
Subject: Your EPA Inquiry - Problems with VW's Diesel Particulate Filter

Ex. 6 08/12/2015 06:47:33 PM---UserWord human

From: Ex. 6
To: OTAQ@EPA,
Date: 08/12/2015 06:47 PM
Subject: Your EPA Inquiry - (012184731) Ex. 6 - Diesel Particulate Filter - OTAQ Web

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UserWord
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Word
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Best Regards,

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 8/18/2015 8:27:54 PM
Subject: DAILY: UAW calls potential China-made Buick 'alarming' | Acura delays NSX launch | Aston plans 800-hp, all-electric Rapide | U.S. joins German probe of Ford

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The UAW is criticizing the prospect of General Motors importing a Buick crossover from China, calling the potential move "alarming."

Acura delays NSX launch until first quarter of 2016

Acura says deliveries of the all-wheel-drive NSX supercar have been pushed back to the first quarter of 2016. Honda's luxury division said earlier this year it was targeting deliveries for the end of 2015.

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Aston aims to launch 800-hp, all-electric Rapide in 2 years

Aston Martin is betting that even James Bond won't mind an 800-hp electric car. The longtime builder of British sports cars will bring an all-electric version of its four-door Rapide to market in two years, CEO Andy Palmer confirmed to Automotive News.

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"I had Dealertrack, ADP, and Reynolds in my stores. I recently switched all 7 to Reynolds."

"Many people base this type of decision on price, but I decided not to. I did my own total cost analysis focused on the product and the retail process and Reynolds and Reynolds blew the competition away." - Joe Lahart, President of Premier Companies

See why Joe switched.

Mercedes-Benz reveals S-class cabriolet, report says

Mercedes-Benz lifted the veil partially on an all-new, open-top cabriolet based on the new S-class coupe that went on sale earlier this year. Mercedes says it will also be the first S-class cabriolet with four seats since 1971.

The United States' securities watchdog is helping German prosecutors to investigate the alleged payment of bribes by Ford to speed the passage of containers through Russian customs, Reuters reported.

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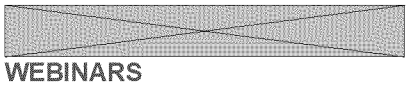

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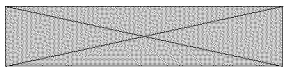

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From: Automotive News
Sent: Tue 8/18/2015 8:28:17 PM
Subject: DAILY: UAW calls potential China-made Buick 'alarming' | Acura delays NSX launch | Aston plans 800-hp, all-electric Rapide | U.S. joins German probe of Ford

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August 18, 2015

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UAW calls potential China-made Buick 'alarming'

The UAW is criticizing the prospect of General Motors importing a Buick crossover from China, calling the potential move "alarming."

Acura delays NSX launch until first quarter of 2016

Acura says deliveries of the all-wheel-drive NSX supercar have been pushed back to the first quarter of 2016. Honda's luxury division said earlier this year it was targeting deliveries for the end of 2015.

MOST READ (Last 7 days)

Thousands of vehicles burned in fatal blast at China port
Toyota says more than 50 staff injured in China port explosions
FCA's union workers set strike authorization vote for Aug. 20
After ripping Ford, Trump says other automakers

Aston aims to launch 800-hp, all-electric Rapide in 2 years

Aston Martin is betting that even James Bond won't mind an 800-hp electric car. The longtime builder of British sports cars will bring an all-electric version of its four-door Rapide to market in two years, CEO Andy Palmer confirmed to Automotive News.

Mercedes-Benz reveals S-class cabriolet

Mercedes-Benz lifted the veil partially on an all-new, open-top cabriolet based on the new S-class coupe that went on sale earlier this year. Mercedes says it will also be the first S-class cabriolet with four seats since 1971.

US watchdog reportedly helping German prosecutors probe Ford, report says

The United States' securities watchdog is helping German prosecutors to investigate the alleged payment of bribes by Ford to speed the passage of containers through Russian customs, Reuters reported.

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building in Mexico are next

VW spent two years trying to hide a security flaw

"I had Dealertrack, ADP, and Reynolds in my stores. I recently switched all 7 to Reynolds."

"Many people base this type of decision on price, but I decided not to. I did my own total cost analysis focused on the product and the retail process and Reynolds and Reynolds blew the competition away." - Joe Lahart, President of Premier Companies

See why Joe switched.

AutoNation adds 16 stores, makes biggest purchase since 2001

Woodward Dream Cruise sights and sounds: A wild celebration of car culture

BLOG: RICHARD TRUETT

How to solve global emissions rift, without dealing in reality

Tesla, VW remain only Takata airbag users without recalls

NEWS ANALYSIS

Automakers in Russia left with nowhere to turn as economic woes deepen

Wells Fargo adding car loan branches to boost less risky lending

Hyundai, Kia replace China executives after sales slump

Toyota ends Land Cruiser output in Russia but remains bullish on market's prospects

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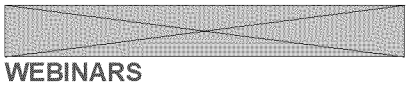
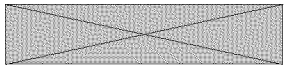
EVENTS
» Sept. 22 - NY Marketing Seminar



WEBINARS
» Aug. 20 at 2pm ET - Online Marketing

» Oct. 1 - Automobilwoche Kongress
» Oct. 14 - Best Dealerships To Work For
» Jan. 12 - Automotive News World Congress

by CarGurus
» Sept. 1 at 2pm ET - Used Inventory Financing
by NextGear Capital
» Sept. 10 at 2pm ET - Buyer Detection
by Outsell
» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM



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To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Wed 8/19/2015 8:04:36 AM
Subject: Merge Those Powertrain Operations

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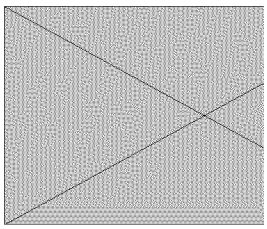

August 19, 2015

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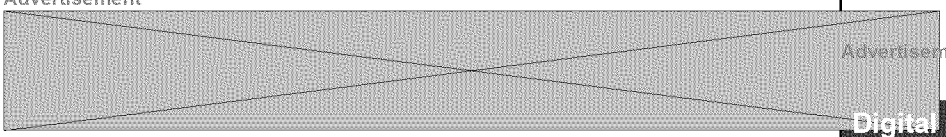

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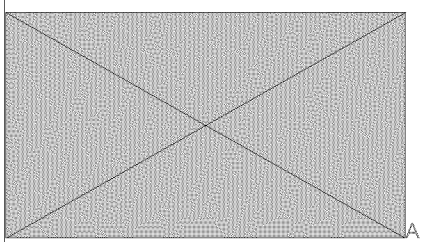
Ford Ushers Assembly Into Virtual World



A new digital lab in Dearborn ramps up Ford's ability to use virtual reality in solving problematic vehicle-assembly operations. Ergonomic issues are down 90%, and the number of days missed by injured employees has dropped 75%.

FULL ARTICLE

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Toyota: Tacoma Demand, Loyalty Stand Up to New GM Trucks

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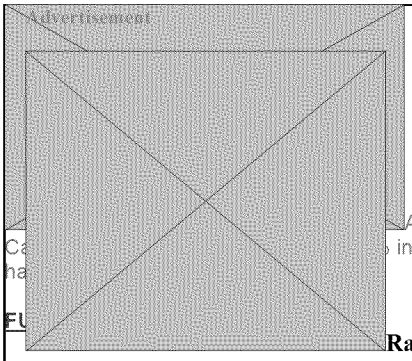


A Toyota official credits the Colorado and
Ca increase through July, saying the GM models
ha

FU

Rapid Manufacturing for Metals

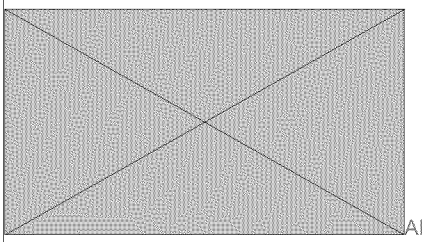
Proto Labs' latest materials-focused white paper explores metal properties and the molding, machining and 3D printing processes used to manufacture quick-turn parts. The paper examines materials ranging from soft metals like aluminum and magnesium to hard metals like steel and stainless steel. Learn which materials bring added strength, reduced weight and other benefits that help determine the right path to metal prototypes and low-volume production parts.

Which Republican candidate is best for the auto industry? Log In and Vote.

Jeb Bush Ben Carson Chris Christie Ted Cruz Carly Fiorina Jim Gilmore Lindsay Graham Mike Huckabee Bobby Jindal John Kasich George Pataki Rand Paul Rick Perry Marco Rubio Rick Santorum Donald Trump Scott Walker

FULL ARTICLE

8-, 9-Speeds, CVTs Make ’15 Gains



Although 6-speed automatic transmissions still dominate, 8- and 9-speed automatics and CVTs make further inroads in ’15-model light-vehicles.

FULL ARTICLE

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The race to 54.5 mpg by 2025 is on.
ArcelorMittal’s commercially available advanced steel grades, coupled with emerging and longer-term breakthrough steels, provide Body-in-White weight reduction solutions that will help automakers achieve 54.5 mpg by 2025, at a lower cost – and with lower total life cycle CO2 emissions – than competing materials. Click Here

Death of an LT4, Or What You Didn't Read in My Cadillac CTS-V Review

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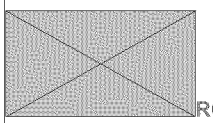
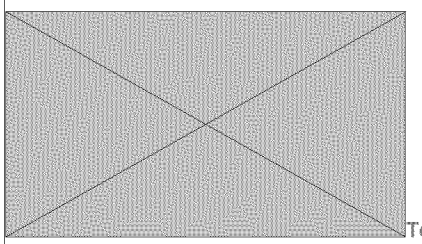
 ROAD AHEAD BLOG
I'm relatively satisfied the bug that blew the engine will not make it into production units. But it's still an interesting story and deserves to be told.

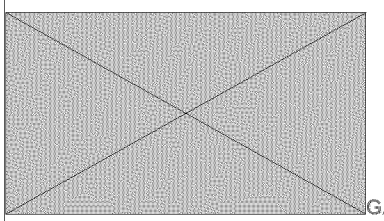
FULL ARTICLE

'16 Cadillac CTS-V Express Jet for Street, Track

 Test Drive
A 640-hp 6.2L supercharged LT4 V-8 spins up so quickly and pins its passengers into their seats so firmly you'd expect to hear, "flight attendants, prepare for departure," before taking off.

FULL ARTICLE

'16 Cadillac CTS-V

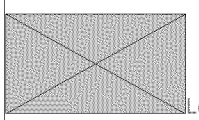
 GALLERY
'16 Cadillac CTS-V tackles legendary Road America course in Elkhart Lake, WI.

Nanogenerator Stores Energy When Rubber Meets Road

The amount of energy saved can vary depending on the vehicle, but University of Wisconsin researcher Xudong Wang predicts about a 10.4% increase in the average vehicle's gas mileage, given a 50% friction energy conversion efficiency.

FULL ARTICLE

Autoline Daily

 Long-time automotive journalist and Ward's columnist John McElroy presents his take on the top industry news of the day.

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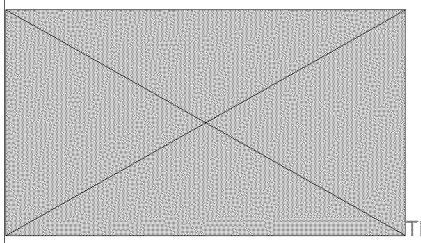
Digital Magazine

Lexus's Segment Share Undercut Without 3 Row RX

Lexus's Jeff Bracken says the Toyota luxury brand could make an announcement soon on a three-row RX, seemingly confirming reports of the CUV's existence.

FULL ARTICLE

Ford: Regional Hubs, Flexible Platforms Part of Emerging-Markets Strategy

 There will be two versions of the next Focus, one with a more expensive independent rear suspension for mature markets and another with a less-pricey solid rear axle for cost-sensitive emerging markets, the automaker's purchasing chief reveals.

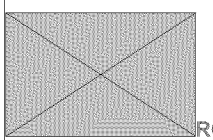
FULL ARTICLE

European Parliament, Auto-Industry Groups Tout TTIP

A study by the Petersen Institute of International Economics contends harmonizing U.S.-EU safety and environmental regulations would boost the automotive trade at least 20%.

FULL ARTICLE

Merge Those Powertrain Operations

 ROAD AHEAD BLOG
In the NAFTA market alone, GM, Ford and FCA will build nearly 9 million engines and 9 million transmissions this year. FCA estimates nearly 90% of that production overlaps.

FULL ARTICLE

Honda's Pilot Elite Rises Back to Top of Ad Ranking

Volkswagen and Dodge rejoin the Top 5 list, with overall TV ad spending flat for the week at $75.8 million.

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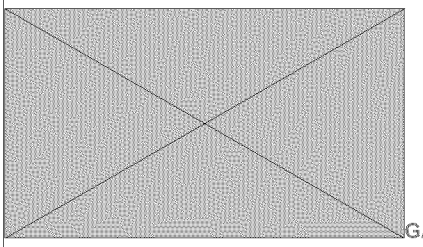
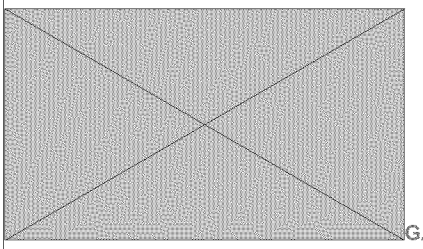
Pebble Beach Close Up



GALLERY

A closer look at some of the vehicles on display this past weekend in Carmel, CA, at the 65th annual Pebble Beach Concours d'Elegance.

2015 Pebble Beach Concours d'Elegance



GALLERY

Carmel, CA, hosted the 65th annual Pebble Beach Concours d'Elegance this past weekend, showcasing 200 exceptional vehicles dating from 1902 to 1966.

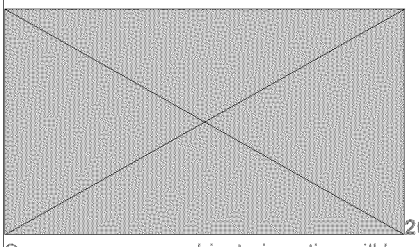
FULL ARTICLE

Imported Impala Stickers for Less in Korea Than U.S.

Despite special processing, shipping, import duties and other regulatory costs, the fullsize Chevrolet's sticker price in Korea is at least $3,000 less than an identical car sold in the U.S. GM Korea CEO Sergio Rocha doesn't say how it is done.

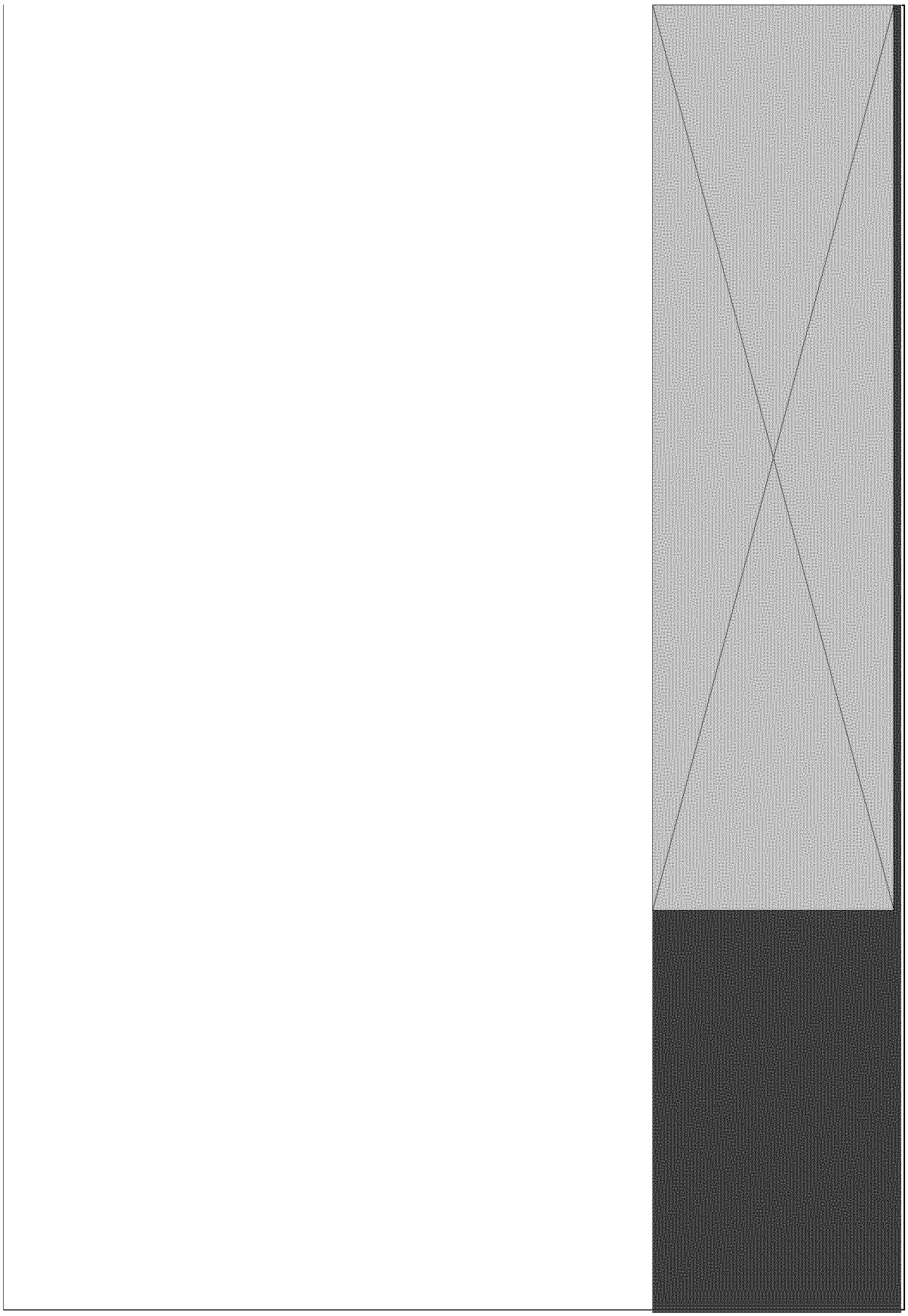
FULL ARTICLE

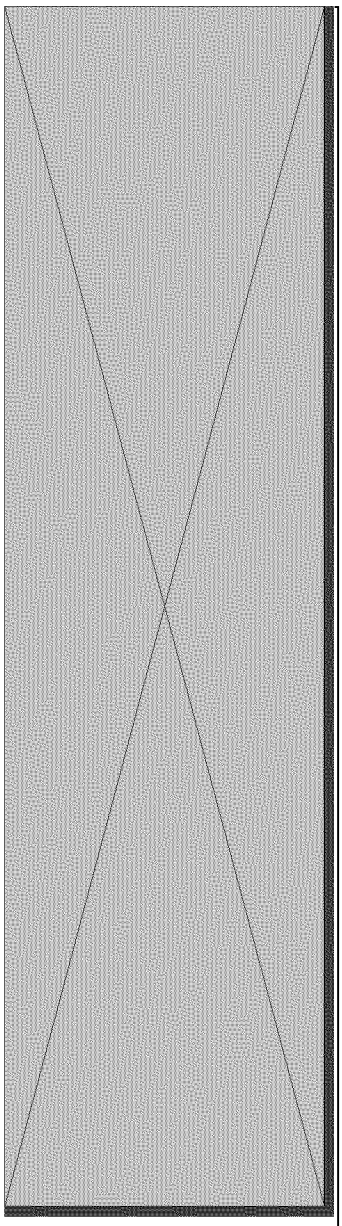
Kia Releases Rendering of Revamped Sportage



2015 Frankfurt Auto Show

Sources say a new drivetrain option will be available with the restyled CUV, which goes on sale next year.





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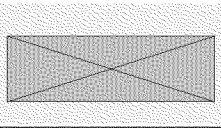
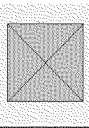
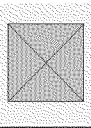
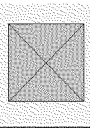
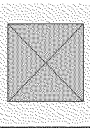
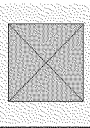

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. .

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From: Automotive News
Sent: Wed 8/19/2015 12:44:54 PM
Subject: A.M. NEWSCAST: Audi's answer to Tesla | McConaughey to pitch redesigned Lincoln MKX - report | Volvo: U.S. looking up | SEC aiding Ford probe? | Keeper of Fiat's legacy

August 19, 2015

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customerservice@autonews.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Khan, Farrukh
Sent: Wed 8/19/2015 1:55:50 PM
Subject: FW: Questions regarding [redacted] Ex. 4 - CBI

Hi Jim,

Any update on this from Rob? Also can you give us some feedback on our presentation from 7/23/15 meeting on active engine and transmission warm up.

Thanks,

Farrukh

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, August 03, 2015 3:34 PM
To: Khan, Farrukh <KhanF@NRD.NISSAN-USA.COM>
Subject: RE: Questions regarding [redacted] Ex. 4 - CBI

I forwarded it to Rob..

From: Khan, Farrukh [mailto:KhanF@NRD.NISSAN-USA.COM]
Sent: Monday, August 03, 2015 3:16 PM
To: Snyder, Jim
Subject: RE: Questions regarding [redacted] Ex. 4 - CBI

Hi Jim,

Can you please confirm with Rob French about the C/O expiration date?

Thanks,

Farrukh

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, July 14, 2015 5:07 PM
To: Khan, Farrukh <KhanF@NRD.NISSAN-USA.COM>
Subject: RE: Questions regarding Ex. 4 - CBI

1. For carry-over. I haven't heard of any expiration date for carry-over. It will may be related to Tier 3 phase-in and allowable fuel. When the emissions tests used for Litmus are no longer valid or considered valid. Rob French may have a better response. He is out of the office until next week.

2. The released guidance was edited down to release sooner to give manufacturers more lead time. More detailed follow up documents will follow. I expect those statements or something similar will be in the upcoming document.

3. I attached the new Calculator. It is still new so let us know if you find any errors with it.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Khan, Farrukh [mailto:KhanF@NRD.NISSAN-USA.COM]
Sent: Tuesday, July 14, 2015 11:07 AM
To: Snyder, Jim
Subject: Questions regarding CD-15-15

Hi, Jim,

I received following questions from Japan regarding the latest EPA guidance letter (CD-15-15),

Question #1

Nissan will continue to use **Ex. 4 - CBI**

Does this regulation has expiration date for this carry-over?

Question #2

In Nissan's understanding, EPA removed the following comment which was included in the draft.

What is the reason that EPA removed this?

"Model types that experience a change in label values relative to the 2016 model year (where the vehicle itself and the underlying label test data have not changed) may use the following language on the label to facilitate consumers' understanding of the difference in label values: "These estimates reflect new EPA methods beginning with 2017 models."

Question #3

Does EPA have a plan to update FE calculation spread sheet? See attached files that we received from Dave Good on May 08, 2010 and his original message below,

(Nissan is using this file to validate the FE number)

-----Original Message-----

From: Good.David@epamail.epa.gov [mailto:Good.David@epamail.epa.gov]

Sent: Saturday, May 08, 2010 7:37 PM

To: Darin_Johnson@AHM.Honda.com; peter_meier@ahm.honda.com; richard.thomas@vw.com; dennis.reineke@vw.com; thomas.hofmann@bmwna.com;

wilhelm.hall@bmwna.com; deborah.a.zielesch@gm.com; adelarosa@ferrariusa.com; elarue1@ford.com; rbabcock@hatci.com; Khan, Farrukh; ogumah@ntcna.nissan-usa.com; vvarjabe@jaguar.com; drobertson@mazdausa.com; alex.travis@na.mitsubishi-motors.com; wlewis@porschecars.com; tony.dambrosi@tema.toyota.com; jennifer.jasperson@tema.toyota.com; balsip@suz.com; gbuffali@volvocars.com; cander44@volvocars.com; plennvi@volvocars.com; jcabaniss@aiam.org; r.maxwell@email.sae.org; remaxwell@comcast.net; gambrozaitis@autoalliance.org; rseal3@jaguar.com; kbalmer@landrover.com; jyarrow@astonmartin.com; kenboshart@msn.com; juliawinter@msn.com; jcusuman@ford.com; ddoku@maseratiusa.com; shkim@hatci.com; vdauria@volvocars.com; doug.devries@gm.com; john.healey@mbusa.com; dennis.pawlak@na.mitsubishi-motors.com; joan.whinihan@na.mitsubishi-motors.com; luis.hernandez@suz.com; ross.gatzke@porsche.us; bstott@ferrariusa.com; ml90@chrysler.com; andreas.roessler@daimler.com; jdf14@chrysler.com; asw9@chrysler.com; kkawag10@ford.com; kiriri@nano.tec.toyota.co.jp; dbarker@hatci.com; RMacleish@lotuscars.com; dlister@lotuscars.co.uk; sway@lotuscars.co.uk; SStewart@lotuscars.co.uk; woolery@subaru-research-mi.com; shinoharah@srd.subaru-fhi.co.jp; JRugge@subaru.com; gheiser@ford.com; David.Henry@roush.com; rocco.bellino@roush.com; shaun.roopnarine@mbusa.com; r-thomas.brunner@mbusa.com

Cc: Peavyhouse.Robert@epamail.epa.gov; Yang.Ching-Shih@epamail.epa.gov; Manners.Mary@epamail.epa.gov; Wehrly.Linc@epamail.epa.gov

Subject: EPA Fuel Economy - Two 2011 EPA FE Calculators Attached (which manufacturers might find helpful)

To manufacturers,

Attached is an Excel spreadsheet calculator which you might find

helpful. It contains a wealth of information about rounding procedures,

harmonic averaging, 5-cycle fuel economy label calculations, etc.

according to the latest EPA regulations and guidance letters, (including

the corrections & regulation changes in EPA's direct final rule

published on Nov 25, 2009, ref 74 FR 61537).

Also attached is a spreadsheet which I use to calculate derived 5-cycle FE Label values with several tabs containing annual fuel costs tables. [Manufacturers' annual fuel cost calculations frequently have rounding errors (and other more significant errors) when I run the FE Guide tables for manufacturers.]

I think the macros, calculations and information in both spreadsheet are accurate, but if they are not accurate according to applicable regulations, the regulations take precedence.

If you find any mistakes, please contact Bob Peavyhouse and me (and we will correct the equations in the spreadsheets and resend to all).

Regards

(See attached file: 2011 EPA FE Calculator V01-w-no-CAFE-4-27-10.xls)
(See attached file: 5-cycle calcs-2008-2011-ann-fuel-cost-for release.410.xls)

----- Forwarded by David Good/AA/USEPA/US on 05/08/2010 06:57 PM -----

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| From: |

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|Robert Peavyhouse/AA/USEPA/US
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| To: |

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|OAR-OTAQ-CISD-
LDVG |

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| Cc: |

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|Mary Manners/AA/USEPA/US@EPA, Ching-Shih Yang/AA/USEPA/US@EPA, Roberts
French/AA/USEPA/US@EPA, Karen Danzeisen/AA/USEPA/US@EPA |

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| Date: |

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|04/27/2010 02:47 PM |

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| Subject: |

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|2011 EPA FE Calculator V01 |

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CISD-LDVG,

This is a comprehensive EPA fuel economy calculator that I created with

MINIMAL macros.

The only macro contained is a 1-line custom Excel function that performs

ASTM rounding.

Because no macro needs to be run, all calculations update as soon as the data is entered.

It calculates the following:

1) 2011+ labels using all 7 sets of fuel economy calculations
2) Label Range
3) Label Annual Fuel Cost
4) Gas guzzler fuel economy

It also contains an explanation of why we use harmonic averaging and why we use ASTM rounding.

Dave is going to send it out to the manufacturers in an effort to reduce a lot of their calculation errors.

I thought you all might want a copy as well (especially the manufacturer reps).

Robert Peavyhouse

Compliance and Innovative Strategies Division

U.S. EPA - Office of Transportation and Air Quality

phone: (734) 214-4814

fax: (734) 214-4869

email: peavyhouse.robert@epa.gov

website: http://www.epa.gov/nvfel/

Regards,

Farrukh

To: jboesel@calstart.org[jboesel@calstart.org]
From: Grundler, Christopher
Sent: Wed 8/19/2015 2:18:34 PM
Subject: Re: Where are the whales??

Cool

I have a breakfast mtg at 730 w Karl and ICCT but will look for u after Mary N session

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Ex. 6

> Want to meet for breakfast and discuss? 7:30? **Ex. 6**
> John
>
> Sent from my iPhone
>
>> On Aug 18, 2015, at 7:17 PM, "Grundler, Christopher" <grundler.christopher@epa.gov> wrote:
>>
>>
>>
>> Christopher Grundler, Director
>> Office of Transportation and Air Quality
>> U.S. EPA
>> 202-564-1682 (DC)
>> 734-214-4207 (Ann Arbor)

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Wed 8/19/2015 2:24:19 PM
Subject: FW: VW Group Request for Approval

Jim,

I uploaded the RFA letter to Verify as **Ex. 4 - CBI**

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Rodgers, William (EEO)
Sent: Tuesday, August 18, 2015 11:02 AM
To: "Jim Snyder' (Snyder.Jim@epamail.epa.gov)'
Cc: Schuetze, Michael (N/EA-521); Giles, Michael; Allen, Gregory (EEO)
Subject: VW Group Request for Approval
Importance: High

Hello Jim,

Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 8/19/2015 8:22:54 PM
Subject: DAILY: GM extends Oshawa line operations | Lincoln brings back McConaughey | Edmunds launches faster way to show if price is right | Toyota to reveal redesigned Prius

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August 19, 2015

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GM extends Oshawa assembly line operations until 2017

GM will keep an Oshawa, Ontario, assembly line operating until 2017, the company's Canadian unit said today, extending the life of a line that has been repeatedly scheduled for closure over the last decade.

Lincoln brings back McConaughey for new MKX ads

Actor Matthew McConaughey is getting behind the wheel of another Lincoln, the redesigned MKX crossover, for a series of commercials set to run next month.

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Toyota says more than 50 staff injured in China port explosions
FCA's union workers set strike authorization vote for Aug. 20
AutoNation adds 16 stores, makes biggest purchase since 2001
UAW calls

Advertisement

Edmunds launches faster way to show buyers if price is right

Edmunds.com has launched a new tool that it says will bring more transparency to the car-buying process. Edmunds Express, launched this week, allows the 13,000 U.S. franchised dealers who use Edmunds' products to tap the third-party site to verify to their customer that the vehicle they're considering is fairly priced.

"I had Dealertrack, ADP, and Reynolds in my stores. I recently switched all 7 to Reynolds."

"[illegible] analysis focused on the product and the retail process and Reynolds blew the competition away."

- [illegible]

potential China-made Buick 'alarming'
Has the Taurus comeback story come to an end?

Toyota to reveal redesigned Prius at CES; Honda ready for takeoff

Toyota will reveal the first redesign of the Prius in almost seven years in Las Vegas next month, wagering that new looks can revive demand for its top-selling hybrid.

GM expands recall of Buicks and Pontiacs with defective headlights to include 180,504 more vehicles

General Motors is expanding a recall of Buicks and Pontiacs with defective low-beam headlights to include 180,504 more vehicles, the automaker said today.

Honda is ready for takeoff, That's the message, at least, as the manufacturing giant shows off a varying cross section of its product portfolio, from ASIMO the robot to the new HR-V, Civic Type R and Acura NSX, in "Ignition," which tops the new entrants on our weekly top viral video rankings.

2015 FRANKFURT AUTO SHOW

Audi plans all-electric SUV to fight Tesla Model X

Toyota extends halt in Tianjin operations on safety concerns

Volvo first-half profit rises 71% as Europe offsets China, N.A. slowdown

Japan faces shortage of replacement airbags as recalls expand

Autoliv says M/A-COM unit acquisition will beef up automated-driving tech

HANNAH LUTZ

Why industry's trudging tech rep no longer applies

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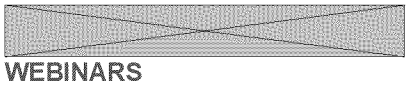
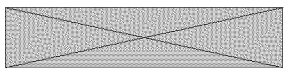


EVENTS
» Sept. 22 - NY Marketing Seminar
» Oct. 1 - Automobilwoche

WEBINARS
» Aug. 20 at 2pm ET - Online Marketing
by CarGurus



Kongress
» Oct. 14 - Best Dealerships To Work For
» Jan. 12 - Automotive News World Congress

» Sept. 1 at 2pm ET - Used Inventory Financing
by NextGear Capital
» Sept. 10 at 2pm ET - Buyer Detection
by Outsell
» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» F&I Practices: How to Stay Out of Jail!

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1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Khan, Farrukh[KhanF@NRD.NISSAN-USA.COM]
From: Snyder, Jim
Sent: Wed 8/19/2015 9:17:27 PM
Subject: RE: Questions regarding CD-15-15

Ex. 4 - CBI

From: Khan, Farrukh [mailto:KhanF@NRD.NISSAN-USA.COM]
Sent: Wednesday, August 19, 2015 9:56 AM
To: Snyder, Jim
Subject: FW: Questions regarding CD-15-15

Hi Jim,

Any update on this from Rob? Also can you give us some feedback on our presentation from

Ex. 4 - CBI

Thanks,

Farrukh

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, August 03, 2015 3:34 PM
To: Khan, Farrukh <KhanF@NRD.NISSAN-USA.COM>
Subject: RE: Questions regarding CD-15-15

I forwarded it to Rob..

From: Khan, Farrukh [mailto:KhanF@NRD.NISSAN-USA.COM]
Sent: Monday, August 03, 2015 3:16 PM
To: Snyder, Jim
Subject: RE: Questions regarding CD-15-15

Hi Jim,

Can you please confirm with Rob French about the C/O expiration date?

Thanks,

Farrukh

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, July 14, 2015 5:07 PM
To: Khan, Farrukh <KhanF@NRD.NISSAN-USA.COM>
Subject: RE: Questions regarding CD-15-15

Ex. 4 - CBI

2. The released guidance was edited down to release sooner to give manufacturers more lead time. More detailed follow up documents will follow. I expect those statements or something similar will be in the upcoming document.

3. I attached the new Calculator. It is still new so let us know if you find any errors with it.

Jim Snyder

Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Khan, Farrukh [mailto:KhanF@NRD.NISSAN-USA.COM]
Sent: Tuesday, July 14, 2015 11:07 AM
To: Snyder, Jim
Subject: Questions regarding CD-15-15

Hi, Jim,

Ex. 4 - CBI

Question #2

Ex. 4 - CBI

Question #3

Does EPA have a plan to update FE calculation spread sheet? See attached files that we received from Dave Good on May 08, 2010 and his original message below,

Ex. 4 - CBI

-----Original Message-----

From: Good.David@epamail.epa.gov [mailto:Good.David@epamail.epa.gov]

Sent: Saturday, May 08, 2010 7:37 PM

To: Darin_Johnson@AHM.Honda.com; peter_meier@ahm.honda.com; richard.thomas@vw.com; dennis.reineke@vw.com; thomas.hofmann@bmwna.com; wilhelm.hall@bmwna.com; deborah.a.zielesch@gm.com; adelarosa@ferrariusa.com; elarue1@ford.com; rbabcock@hatci.com; Khan, Farrukh; ogumah@ntcna.nissan-usa.com; vvarjabe@jaguar.com; drobertson@mazdausa.com; alex.travis@na.mitsubishi-motors.com; wlewis@porschecars.com; tony.dambrosi@tema.toyota.com; jennifer.jasperson@tema.toyota.com; balsip@suz.com; gbuffali@volvocars.com; cander44@volvocars.com; plennvi@volvocars.com; jcabaniss@aiam.org; r.maxwell@email.sae.org; remaxwell@comcast.net; gambrozaitis@autoalliance.org; rseal3@jaguar.com; kbalmer@landrover.com; jyarrow@astonmartin.com; **Ex. 6** jcusuman@ford.com; ddoku@maseratiusa.com; shkim@hatci.com; vdauria@volvocars.com; doug.devries@gm.com; john.healey@mbusa.com; dennis.pawlak@na.mitsubishi-motors.com; joan.whinihan@na.mitsubishi-motors.com; luis.hernandez@suz.com; ross.gatzke@porsche.us; bstott@ferrariusa.com; ml90@chrysler.com; andreas.roessler@daimler.com; jdf14@chrysler.com; asw9@chrysler.com; kkawag10@ford.com; kiriri@nano.tec.toyota.co.jp; dbarker@hatci.com; RMacleish@lotuscars.com; dlister@lotuscars.co.uk; sway@lotuscars.co.uk; SStewart@lotuscars.co.uk; woolery@subaru-research-mi.com; shinoharah@srd.subaru-fhi.co.jp; JRugge@subaru.com; gheiser@ford.com; David.Henry@roush.com; rocco.bellino@roush.com; shaun.roopnarine@mbusa.com; r-thomas.brunner@mbusa.com

Cc: Peavyhouse.Robert@epamail.epa.gov; Yang.Ching-Shih@epamail.epa.gov; Manners.Mary@epamail.epa.gov; Wehrly.Linc@epamail.epa.gov

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To manufacturers,

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(See attached file: 5-cycle calcs-2008-2011-ann-fuel-cost-for

release.410.xls)

----- Forwarded by David Good/AA/USEPA/US on 05/08/2010 06:57 PM -----

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| From: |

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|Robert Peavyhouse/AA/USEPA/US

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LDVG |

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|Mary Manners/AA/USEPA/US@EPA, Ching-Shih Yang/AA/USEPA/US@EPA, Roberts French/AA/USEPA/US@EPA, Karen Danzeisen/AA/USEPA/US@EPA |

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|04/27/2010 02:47 PM |

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|2011 EPA FE Calculator V01 |

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3) Label Annual Fuel Cost
4) Gas guzzler fuel economy

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phone: (734) 214-4814

fax: (734) 214-4869

email: peavyhouse.robert@epa.gov

website: http://www.epa.gov/nvfel/

Regards,

Farrukh

To: Abraham Vinita (vinita.abraham@linde.com)[vinita.abraham@linde.com]; Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Amy Ficon (amy.ficon@linde.com)[amy.ficon@linde.com]; Amy Lilly (alilly@hatci.com)[alilly@hatci.com]; angie_nucci@ahm.honda.com[angie_nucci@ahm.honda.com]; Annabel Cook (Annabel_cook@ahm.honda.com)[Annabel_cook@ahm.honda.com]; Ben Xiong[bxiong@cafcp.org]; Bill Elrick[belrick@CAFCP.org]; Brandi Gonzales[bgonzales@CAFCP.org]; Brian Johnston (johnstb@ntcna.nissan-usa.com)[johnstb@ntcna.nissan-usa.com]; Chris White[cwhite@CAFCP.org]; Derek Joyce (djoyce@hmausa.com)[djoyce@hmausa.com]; Geoffrey Budd (gb@itm-power.com)[gb@itm-power.com]; Geri Yoza (Geri_yoza@toyota.com)[Geri_yoza@toyota.com]; Gilbert Castillo (gcastillo@hmausa.com)[gcastillo@hmausa.com]; Jacquelyn Birdsall (jacquelyn.birdsall@tema.toyota.com)[jacquelyn.birdsall@tema.toyota.com]; Jaimie Levin (Jaimie@CTE.tv)[Jaimie@CTE.tv]; Jamie Hall (jamie.hall@gm.com)[jamie.hall@gm.com]; Jana Hartline (Jana_Hartline@toyota.com)[Jana_Hartline@toyota.com]; Jean Grigg (jmg@apep.uci.edu)[jmg@apep.uci.edu]; Jeff Swedlund (jeff_swedlund@ahm.honda.com)[jeff_swedlund@ahm.honda.com]; John Shears (shears@ceert.org)[shears@ceert.org]; Juan Contreras[JContreras@CAFCP.org]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Keith Malone[kmalone@CAFCP.org]; Kevin Lee (kslee@hatci.com)[kslee@hatci.com]; Kristen Nawoj (kristen.nawoj@ee.doe.gov)[kristen.nawoj@ee.doe.gov]; Lennie Klebanoff (lekleba@sandia.gov)[lekleba@sandia.gov]; Lora Renz (lora.renz@daimler.com)[lora.renz@daimler.com]; Lourdes C Martinez (lcmartinez@aqmd.gov)[lcmartinez@aqmd.gov]; Lun So[lso@CAFCP.org]; Matthew Elke (matthew.elke@berkeley.edu)[matthew.elke@berkeley.edu]; Melanie Caton (Melanie.Caton@nrel.gov)[Melanie.Caton@nrel.gov]; Michael Strapazon (mstrapazon@webershandwick.com)[mstrapazon@webershandwick.com]; Monique Dunn (monique.dunn@ballard.com)[monique.dunn@ballard.com]; Nico Bouwkamp[nbouwkamp@cafcp.org]; Robert Del Core (rdelcore@hydrogenics.com)[rdelcore@hydrogenics.com]; Sandra Novak (Sandra.Novak@vw.com)[Sandra.Novak@vw.com]; shad.balch@gm.com[shad.balch@gm.com]; Shane Stephens-Romero (shane.stephens@firstelementfuel.com)[shane.stephens@firstelementfuel.com]; **Ex. 7** stephen_ellis@ahm.honda.com[stephen_ellis@ahm.honda.com]; Tim Lipman[telipman@berkeley.edu]; Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; **Ex. 7** **Ex. 7** Bill MacLeod (bmacleod@hyundai-dc.com)[bmacleod@hyundai-dc.com]; Bob Devine (robert.w.devine@baesystems.com)[robert.w.devine@baesystems.com]; Bob Oesterreich (bob.oesterreich@airliquide.com)[bob.oesterreich@airliquide.com]; Brendan Shaffer (bps@apep.uci.edu)[bps@apep.uci.edu]; Brian Goldstein (brian@einow.org)[brian@einow.org]; **Ex. 7** catherine.kim@daimler.com[catherine.kim@daimler.com]; Grundler, Christopher[grundler.christopher@epa.gov]; Chris Moen (cmoen@sandia.gov)[cmoen@sandia.gov]; David Blekhman Ph. D. (blekhman@calstatela.edu)[blekhman@calstatela.edu]; Don Kang (don@ushybrid.com)[don@ushybrid.com]; Dwight Zuck (Dwight.zuck@airliquide.com)[Dwight.zuck@airliquide.com]; Eloi Taha Ph. D. (eloi.taha@nissan-usa.com)[eloi.taha@nissan-usa.com]; Donez, Francisco[Donez.Francisco@epa.gov]; Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; Geoffrey Budd (gb@itm-power.com)[gb@itm-power.com]; **Ex. 7** Geri Yoza (Geri_yoza@toyota.com)[Geri_yoza@toyota.com]; Guevara, Rafael[RGuevara2@semprautilities.com]; Jacquelyn Birdsall (jacquelyn.birdsall@tema.toyota.com)[jacquelyn.birdsall@tema.toyota.com]; Jamie Hall (jamie.hall@gm.com)[jamie.hall@gm.com]; Jared Farnsworth (jared.farnsworth@tema.toyota.com)[jared.farnsworth@tema.toyota.com]; Jason Marcinkoski (jason.marcinkoski@ee.doe.gov)[jason.marcinkoski@ee.doe.gov]; Jay Keller Ph. D. (Jay.Keller@ZCES-Inc.com)[Jay.Keller@ZCES-Inc.com]; Jean Baronas (Jean.Baronas@energy.ca.gov)[Jean.Baronas@energy.ca.gov]; Jeff Grant (jeff.grant@ballard.com)[jeff.grant@ballard.com]; Jeff Reed (jgreed@semprautilities.com)[jgreed@semprautilities.com]; Jerome Gregeois (jgregeois@hatci.com)[jgregeois@hatci.com]; Joan Ogden

(jmogden@ucdavis.edu)[jmogden@ucdavis.edu]; John Shears (shears@ceert.org)[shears@ceert.org]; Joseph Pratt (jwpratt@sandia.gov)[jwpratt@sandia.gov]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Kate Zeng (KZeng@semprautilities.com)[KZeng@semprautilities.com]; Keith Wipke (keith.wipke@nrel.gov)[keith.wipke@nrel.gov]; Kevin Schnepp (kevin.schnepp@cdfa.ca.gov)[kevin.schnepp@cdfa.ca.gov]; Ex. 7 Kristin J. Macey (KMacey@cdfa.ca.gov)[KMacey@cdfa.ca.gov]; Lance Atkins (lance.atkins@nissan-usa.com)[lance.atkins@nissan-usa.com]; Leslie Eudy (leslie.eudy@nrel.gov)[leslie.eudy@nrel.gov]; Lisa Fasano (lfasano@baaqmd.gov)[lfasano@baaqmd.gov]; Lisa Mirisola (lmirisola@aqmd.gov)[lmirisola@aqmd.gov]; Lora Renz (lora.renz@daimler.com)[lora.renz@daimler.com]; Marc Melaina (marc.melaina@nrel.gov)[marc.melaina@nrel.gov]; Mark Guin (mguin@hatci.com)[mguin@hatci.com]; Mark Saxonberg (mark_saxonberg@toyota.com)[mark_saxonberg@toyota.com]; Marshal Miller (mmiller@ucdavis.edu)[mmiller@ucdavis.edu]; Matt McClory (matt.mcclory@tema.toyota.com)[matt.mcclory@tema.toyota.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; Matthew Forrest (matthew.forrest@daimler.com)[matthew.forrest@daimler.com]; McKinney, Jim@Energy[Jim.McKinney@energy.ca.gov]; Michael Beckman (michael.beckman@linde.com)[michael.beckman@linde.com]; Ex. 7 Ex. 7 ; Michael Johnston (michael.johnston@gm.com)[michael.johnston@gm.com]; Michael Lee[MLee3@semprautilities.com]; Michel Archambault (marchambault@hydrogenics.com)[marchambault@hydrogenics.com]; Mike Nicholas (mianicholas@ucdavis.edu)[mianicholas@ucdavis.edu]; Norman Ingram (ningram@cdfa.ca.gov)[ningram@cdfa.ca.gov]; Pat Krayser[pkrayser@aqmd.gov]; Patrick Sullivan (pmsulli@sandia.gov)[pmsulli@sandia.gov]; Polo Del Toro (atoro@sunline.org)[atoro@sunline.org]; Rachel Junken (rachel@ushybrid.com)[rachel@ushybrid.com]; Raney, David W[DRaney@semprautilities.com]; Remy garderet (remy.garderet@einow.org)[remy.garderet@einow.org]; Rex Sanders (rsanders@baaqmd.gov)[rsanders@baaqmd.gov]; Richard Farmer (richard.farmer@ee.doe.gov)[richard.farmer@ee.doe.gov]; Robert Bienenfeld (Robert_Bienenfeld@ahm.honda.com)[Robert_Bienenfeld@ahm.honda.com]; Ron Nies[ron.nies@cdfa.ca.gov]; Ex. 7 rwallac@sandia.gov[rwallac@sandia.gov]; Salvador Llamas (sllamas@actransit.org)[sllamas@actransit.org]; Sam Sprik (sam.sprik@nrel.gov)[sam.sprik@nrel.gov]; 'San Marchi, Christopher W'[cwsanma@sandia.gov]; Sarah Williams (sarah.k.williams@energy.ca.gov)[sarah.k.williams@energy.ca.gov]; Scott Samuelsen[gss@uci.edu]; Shane Stephens-Romero (shane.stephens@firstelementfuel.com)[shane.stephens@firstelementfuel.com]; Ex. 7 Ex. 7 Stephen Jones (sj@itm-power.com)[sj@itm-power.com]; stephen_ellis@ahm.honda.com[stephen_ellis@ahm.honda.com]; Steve Mathison (smathison@hra.com)[smathison@hra.com]; Tammy Sulli (TSulli@cdfa.ca.gov)[TSulli@cdfa.ca.gov]; Tim Lipman[telipman@berkeley.edu]; Tyson Eckerle (tyson.eckerle@gov.ca.gov)[tyson.eckerle@gov.ca.gov]; Will Decker (wd@apep.uci.edu)[wd@apep.uci.edu]; Will James (Charles.James@EE.Doe.Gov)[Charles.James@EE.Doe.Gov]; wvalencia@bki.com[wvalencia@bki.com]; Yesh Premkumar (Yeshwanth.Premkumar@baesystems.com)[Yeshwanth.Premkumar@baesystems.com]; Aaron Harris (Aaron.Harris@airliquide.com)[Aaron.Harris@airliquide.com]; Abraham Vinita (vinita.abraham@linde.com)[vinita.abraham@linde.com]; Amy Lilly (alilly@hatci.com)[alilly@hatci.com]; Andreas Truckenbrodt (andreas.truckenbrodt@truckenbrodts.com)[andreas.truckenbrodt@truckenbrodts.com]; Andrew Papson (apapson@calstart.org)[apapson@calstart.org]; angie_nucci@ahm.honda.com[angie_nucci@ahm.honda.com]; Ann Ellis (AEllis@semprautilities.com)[AEllis@semprautilities.com]; Annabel Cook (Annabel_cook@ahm.honda.com)[Annabel_cook@ahm.honda.com]; Ex. 7 (Ex. 7 afournier@baaqmd.gov[afournier@baaqmd.gov]; Ash Corson (ash_corson@toyota.com)[ash_corson@toyota.com]; Brian Johnston (johnstb@ntcna.nissan-

usa.com)[johnstb@ntcna.nissan-usa.com]; Brook Taylor (brook.taylor@gov.ca.gov)[brook.taylor@gov.ca.gov]; Carl Rivkin (Carl.Rivkin@nrel.gov)[Carl.Rivkin@nrel.gov]; Chad Blake (Chad.Blake@nrel.gov)[Chad.Blake@nrel.gov]; Cherif Youssef (cyoussef@semprautilities.com)[cyoussef@semprautilities.com]; Craig Scott (craig_scott@toyota.com)[craig_scott@toyota.com]; Dan Raudebaugh[dan@cte.tv]; Danny Terlip (Danny.Terlip@nrel.gov)[Danny.Terlip@nrel.gov]; Darren Nguyen (Darren.Nguyen@energy.ca.gov)[Darren.Nguyen@energy.ca.gov]; Erik Bigelow (erik@cte.tv)[erik@cte.tv]; Gilbert Castillo (gcastillo@hmausa.com)[gcastillo@hmausa.com]; Jaimie Levin (Jaimie@CTE.tv)[Jaimie@CTE.tv]; Jean Grigg (jmg@apep.uci.edu)[jmg@apep.uci.edu]; Jeff Swedlund (jeff_swedlund@ahm.honda.com)[jeff_swedlund@ahm.honda.com]; Jennifer Kurtz (Jennifer.Kurtz@nrel.gov)[Jennifer.Kurtz@nrel.gov]; MIKULIN, JOHN[MIKULIN.JOHN@EPA.GOV]; Josh Eichman (Joshua.Eichman@nrel.gov)[Joshua.Eichman@nrel.gov]; Kaori Alarid (kaori.alarid@tema.toyota.com)[kaori.alarid@tema.toyota.com]; Karen Schkolnick (kschkolnick@baaqmd.gov)[kschkolnick@baaqmd.gov]; Kevin Lee (kslee@hatci.com)[kslee@hatci.com]; Kristen Nawoj (kristen.nawoj@ee.doe.gov)[kristen.nawoj@ee.doe.gov]; Larry Wnuk Phd (lwnuk@calstart.org)[lwnuk@calstart.org]; Ex. 7
Ex. 7 Lourdes C Martinez (lcmartinez@aqmd.gov)[lcmartinez@aqmd.gov]; Mary Kathryn Campbell (mkcampbell@calstart.org)[mkcampbell@calstart.org]; Melanie Caton (Melanie.Caton@nrel.gov)[Melanie.Caton@nrel.gov]; Ex. 7
(Ex. 7 Michael Dray (Michael.Dray@calstatela.edu)[Michael.Dray@calstatela.edu]; Michael Neward (mneward@baaqmd.gov)[mneward@baaqmd.gov]; Michael Penev (michael.penev@nrel.gov)[michael.penev@nrel.gov]; Michael Strapazon (mstrapazon@webershandwick.com)[mstrapazon@webershandwick.com]; Michael Tosca (Michael@CTE.tv)[Michael@CTE.tv]; Mike Lord (Michael.lord@tema.toyota.com)[Michael.lord@tema.toyota.com]; Mike Schweizer (schweizerm@mbusa.com)[schweizerm@mbusa.com]; Nitin Natesan (Nitin.Natesan@linde.com)[Nitin.Natesan@linde.com]; Rebecca Pancheri (rebecca_pancheri@toyota.com)[rebecca_pancheri@toyota.com]; Robert Burgess (Robert.Burgess@nrel.gov)[Robert.Burgess@nrel.gov]; Robert Del Core (rdelcore@hydrogenics.com)[rdelcore@hydrogenics.com]; Ronald Grasman (ronald.grasman@daimler.com)[ronald.grasman@daimler.com]; Sandra Novak (Sandra.Novak@vw.com)[Sandra.Novak@vw.com]; Steve Martz (SMartz@semprautilities.com)[SMartz@semprautilities.com]; Tommy Edwards (tedwards@sunline.org)[tedwards@sunline.org]; Ben Xiong[bxiong@cafcp.org]; Bill Elrick[belrick@CAFCP.org]; Brandi Gonzales[bgonzales@CAFCP.org]; Chris White[cwhite@CAFCP.org]; Jennifer Hamilton[JJHamilton@cafcp.org]; Joe Gagliano[JGagliano@CAFCP.org]; Juan Contreras[JContreras@CAFCP.org]; Keith Malone[kmalone@CAFCP.org]; Linda Carrizosa[lcarrizosa@cafcp.org]; Lun So[lso@CAFCP.org]; Nico Bouwkamp[nbouwkamp@cafcp.org]
From: Chris White
Sent: Wed 8/19/2015 9:36:05 PM
Subject: PLEASE RESPOND: Webinar follow-up
Conference_Aug_18_2015_67387960.xlsx
QA from August webinar.docx

Dear OT and Working Group

QUESTION AT THE END OF THIS EMAIL: Should CaFCP host regular webinars that are open to the general public?

Yesterday, CaFCP hosted a webinar for four of our government members to talk about station development status. This was a request that started in early July because the State of California wanted more transparency about the process and status. It was hard to find a date that worked for everyone and when we did find a date, it gave us only five days to get it together.

A small group of members reviewed the agenda and a PDF version of the "public" SmartSheet that we planned to share. We sent the invitation out to our email list and posted on our website. In the first 24 hours, 70 people signed up.

120 people attended the webinar yesterday (see attached list). Many are names you'll recognize and questions ranged from basic (how long does it take to fill the car) to deployment-related (are you still using the UCI map for planning) to technical (how does the HyStep device work). Unfortunately, we learned after the webinar that the StartMeeting program we were testing doesn't store the chat log and we lost the question history. Attached are the questions that we could copy from the log. (We will not be using StartMeeting any more.)

We received several questions and comments after the webinar, and many requests to do these on a monthly basis.

PLEASE RESPOND TO THIS EMAIL WITH YOUR PREFERENCE:

Should CaFCP host regular webinars that are open to the general public?

1. No

2. Yes…work with OT and WG to create a list of topics and dates

3. Yes…suggest topics to OT and WG, and then send a SurveyMonkey to people who attended this webinar

4. Yes…and I have a topic that I want to take the lead on

5. Yes…quarterly updates of station development status. Don't change the topic.

6. _____(something else)

Thanks!

Chris

Chris White | Communications Director | CaFCP

916-870-1431 | cwhite@cafcp.org

@cafcp | www.LinkedIn.com/in/cafcpchris

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Lightweight Vehicle Manufacturing: Joining, Forming & Assembly Summit
Sent: Thur 8/20/2015 7:54:52 AM
Subject: Launch: Europe's 1st Lightweight Vehicle Manufacturing: Joining, Forming & Assembly Summit

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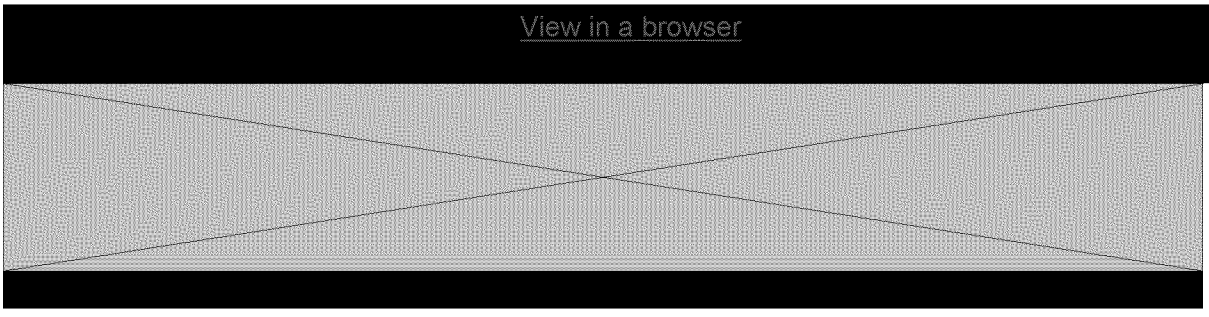

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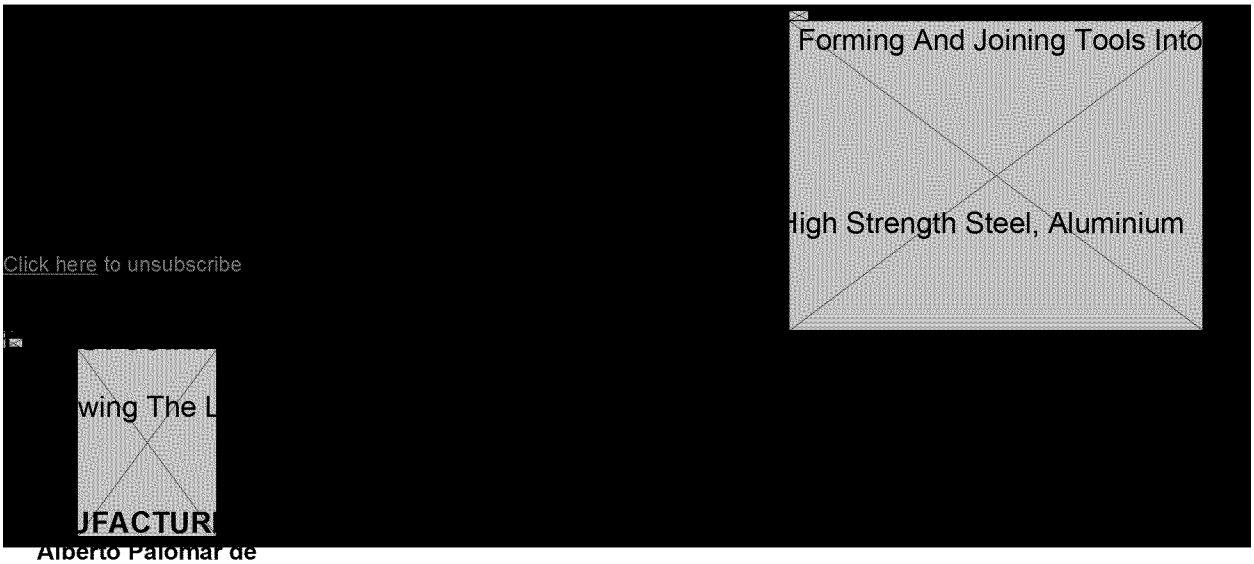

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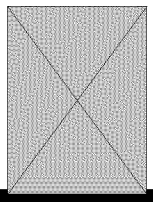

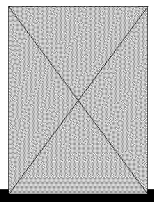

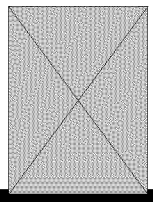

Lightweight Vehicle Manufacturing:
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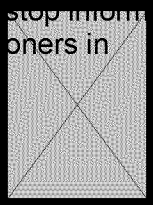

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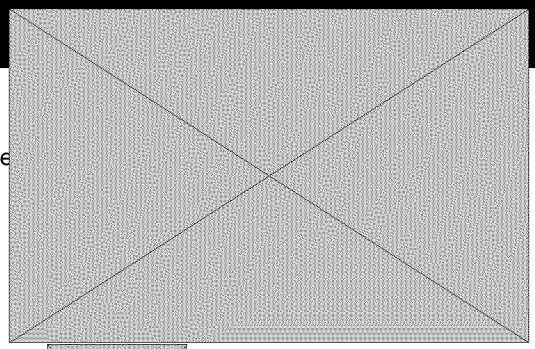
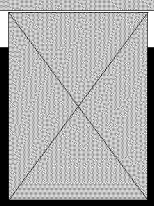
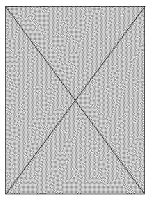




Topic To Be Discussed Include: September to Save £300



Felix Schuler

ME Body System

Adam Opel AG

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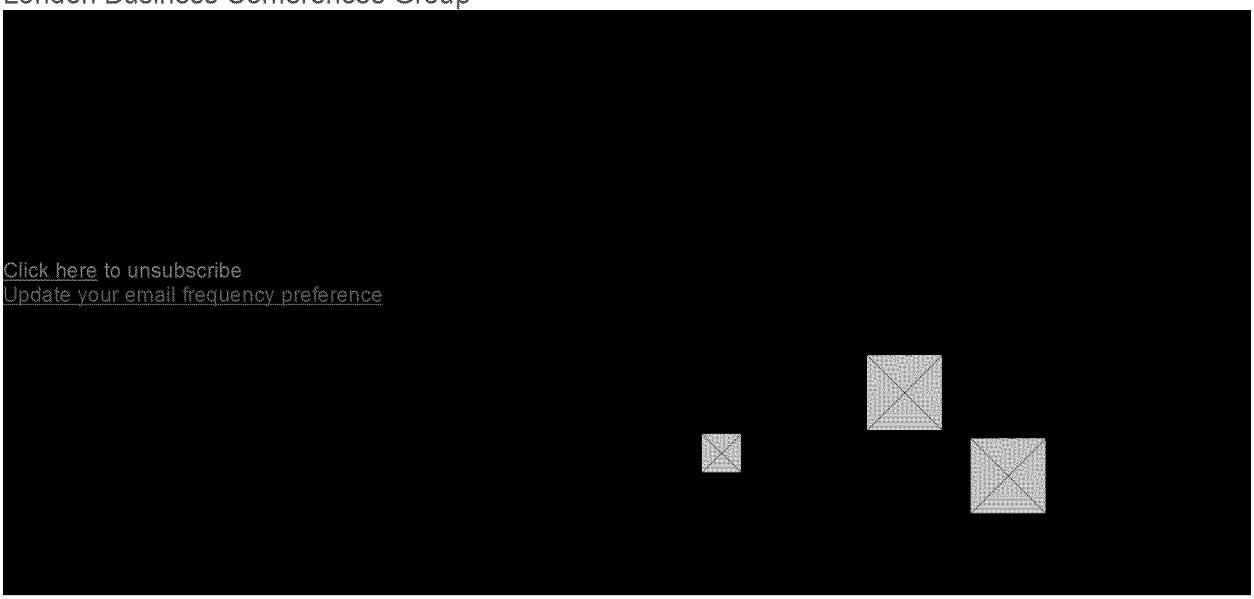

To: Ross Gatzke[Ross.Gatzke@porsche.us]; Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Thur 8/20/2015 12:10:13 PM
Subject: Ex. 4 - CBI

Ex. 4 - CBI

Please find enclosed, the Ex. 4 - CBI. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Thur 8/20/2015 2:07:16 PM
Subject: RE: VW Group Request for Approval

Thanks Jim.

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, August 19, 2015 3:07 PM
To: Rodgers, William (EEO)
Subject: RE: VW Group Request for Approval

See attachment.

-Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, August 19, 2015 10:24 AM
To: Snyder, Jim
Subject: FW: VW Group Request for Approval
Importance: High

Jim,

I uploaded the RFA letter to Verify as [redacted] **Ex. 4 - CBI**

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Rodgers, William (EEO)
Sent: Tuesday, August 18, 2015 11:02 AM
To: "Jim Snyder' (Snyder.Jim@epamail.epa.gov)'
Cc: Schuetze, Michael (N/EA-521); Giles, Michael; Allen, Gregory (EEO)
Subject: VW Group Request for Approval
Importance: High

Hello Jim,

Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Thur 8/20/2015 4:06:03 PM
Subject: Green Car Report Daily Headlines

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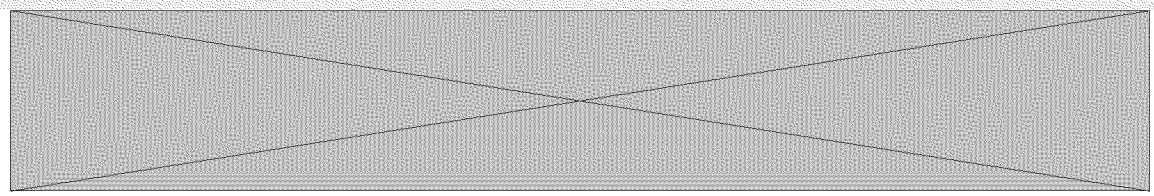

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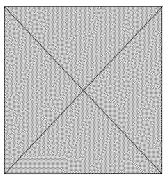
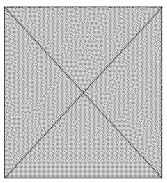
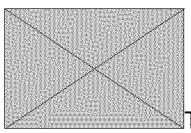




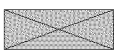
The latest from your friends at GCR:

2016 Toyota Prius, Cadillac Diesels, Mitsubishi i-MiEV Vs VW e-Golf: Today's Car News

Aug 20, 2015 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

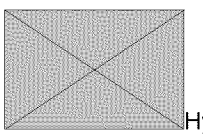
 Today, the 2016 Toyota Prius is confirmed for a September reveal, Cadillac says it will sell diesels in the U.S. again, and we compare two electric cars: the Mitsubishi i-MiEV and Volkswagen e-Golf. All this and more on Green Car Reports. The 2016 Toyota Prius will debut next month at a standalone event ahead of the Frankfurt Motor Show, the...

comments | read more



All-New 2017 Hyundai Elantra Sedan Coming soon

Aug 20, 2015 02:00 pm | feedback@highgearmedia.com (Viknesh Vijayenthiran)

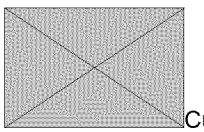
 Hyundai has slipped the first image of its next-generation Elantra and confirmed that the global debut of the new compact sedan will be taking place soon. A local debut at the 2015 Los Angeles Auto Show in November is likely. The car will go on sale in the United States sometime next year, as a 2017 model, bringing with it styling that

resembles...

comments | read more

Cadillac Confirms It Will Bring Diesels Back To The U.S.

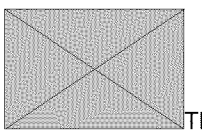
Aug 20, 2015 01:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Currently, several German luxury automakers--including Audi, BMW, Mercedes-Benz, and Porsche--offer diesel models in the U.S. But except for one disastrous experiment decades ago, Cadillac has shied away from diesels in domestically-sold models. That attitude seems to be changing though. DON'T MISS: Diesel Car Guide: Every 2015-2016 Car &...

comments | read more

BMW i3: How Far Can You Go Without Touching The Brake Pedal?

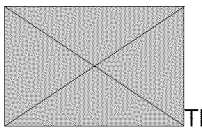
Aug 20, 2015 12:00 pm | feedback@highgearmedia.com (Bengt Halvorson)

 The regenerative braking system in the BMW i3 electric car is quite extreme. If you plan ahead and allow enough stopping distance, by lifting off the accelerator, this little electric car will come to a complete stop, without ever requiring a touch of the brake pedal. That behavior recently led Britain's Auto Express to put that to the...

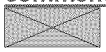
comments | read more

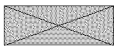
Little i-MiEV Electric Car: How Does It Compare To VW e-Golf?

Aug 20, 2015 11:00 am | feedback@highgearmedia.com (Bengt Halvorson)

 The 2016 Mitsubishi i-MiEV is an outlier—in design, in layout, and in the way it drives. Yet our long-term 2015 Volkswagen e-Golf is nearly the polar opposite—a full battery-electric model wearing the look, feel, and functionality of one of the world's best-selling cars of all time. As we mentioned this past week in a drive...

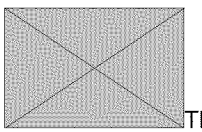
comments | read more



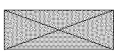


2016 Toyota Prius To Debut Next Month, Prior To Frankfurt Show

Aug 19, 2015 06:49 pm | feedback@highgearmedia.com (Bengt Halvorson)

 The fourth-generation Toyota Prius is fast approaching. Toyota Motor Corporation has confirmed to Bloomberg that the fully redesigned 2016 Toyota Prius will be shown in Las Vegas on September 8, 2015—ahead of its anticipated debut at the Frankfurt Auto Show later next month. The last time the Prius was fully revamped was in 2009, for the...

comments | read more



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To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Thur 8/20/2015 6:10:45 PM
Subject: Volkswagen Test Vehicle Engineering Report - VW324-3-0108/16

Ex. 4 - CBI

Hello Jim,

Ex. 4 - CBI

This FEDV was originally scheduled to be confirmatory tested at EPA on June 10, 2015.

Ex. 4 - CBI

The report was also uploaded electronically to Verify. Please let us know if you have any questions/concerns with the report.

Thank You and Best Regards,

Greg Allen

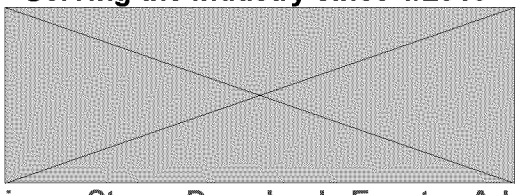
VWGoA EEO

(248)754-4209

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Shmuel De Leon Energy
Sent: Fri 8/21/2015 4:12:52 AM
Subject: Shmuel De-Leon Energy Storage Newsletter - 23/8/2015 - No. 294

Shmuel De-Leon Batteries, Super-capacitors, Fuel cells & EV`s Weekly Newsletter

August 22th, 2015, No. 294
Sent to more than 125,000 industry members
Serving the industry since 1/2010



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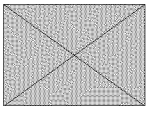
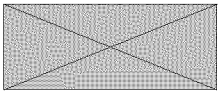
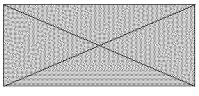
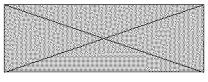
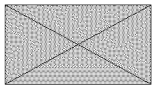
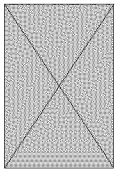







Battery News

Leclanch completes its battery-based energy storage systems with acquisition from ADS-TEC GmbH

Audi: upcoming battery-electric SUV to use LG Chem and Samsung SDI cell modules; 311-mile range

Faradion continues work on its sodium-ion battery

Separator coated with boron-nitride nanosheets improves stability of Li metal anodes

Cornell team uses ice-templating to synthesize porous carbon for high performance electrodes for Li-S batteries

NSF funds new center for advanced 2-D coatings; energy conversion and storage

48 V Eco Drive from Continental Makes Diesel Vehicles Cleaner and More Economical

China's new energy vehicle production rises rapidly

Volvo to take on Ford Focus with new small models

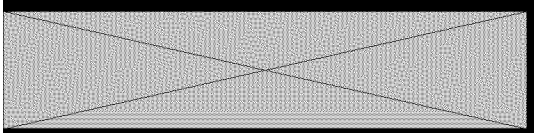
Does Tesla lose $4,000 on each Model S? No

Q2 set the record for most sold plug-in electric cars in the Nordic region

Uganda Pledges to Make Thousands of Hybrid Cars

UK to trial under-road wireless charging for EVs this year

Leviton introduces 7.7 kW Evr-Green charging station



www.arbin.com
antony.p@arbin.com

Partnership aims to bring non-aqueous VRFB to market

First energy storage system launched in India

First 5 production Toyota Mirai fuel cell vehicles for Europe arrive

Zenyatta Ventures and Ballard Power Collaborate on Fuel Cell Technology Related to Energy Storage; Testing by Ballard on Albany Graphite Exhibited High Thermal and Corrosion Resistance Properties

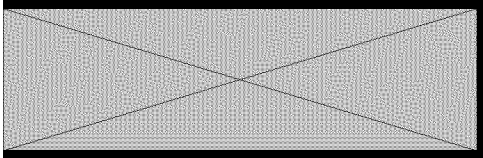
Peterbilt offering Maxwells ultracap ESM

Tantech Holdings to Produce EDLC Carbon Based Aluminum Batteries in Cooperation with Major Battery Manufacturer

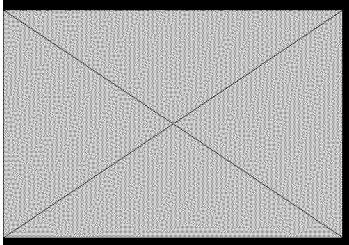
Shmuel De-Leon Energy is looking for partners in Finland, Sweden, Canada, Japan, Korea, China to host and partner on its

The Batteries, Fuel Cells, Super Capacitors & EV Seminar
Seminars Web Site

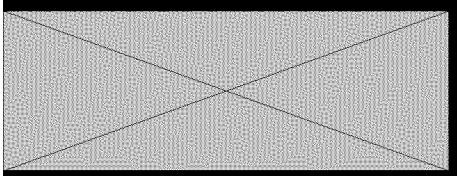
Schedule	Location	Partner Program	Registration
2/9/2015	Oslo, Norway		



www.cnibf.net



19th continuation of annual meetings "Advanced Batteries, Accumulators and Fuel Cells" will be held in City of Brno in August 30th - September 2nd 2015 at the Brno University of Technology. This year, its main interest should be electrochemistry of lithium cells, supercapacitors and materials for them, including Ionic liquids, corrosion of materials, application of nanomaterials, alternative energy - photovoltaic systems.



BATTERY OSAKA, September 3nd-4th, 2015, is a specialised exhibition newly launched in 2014 for manufacturing and R&D of rechargeable batteries. All kinds of materials, manufacturing technologies, inspection/analysis equipment related to rechargeable batteries will be gathering. For exhibiting and visiting inquiries: bj-o@reedexpo.co.jp

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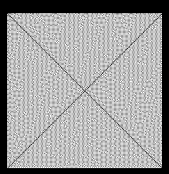
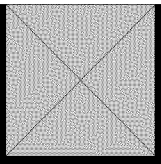


4th International Secondary Lead Conference, 7-8 September 2015, Centara Grand @ CentralWorld and Bangkok Convention Centre.

This biennial Conference is Asia's leading exchange for secondary lead producers, suppliers, markets and lead-acid battery recyclers. The Conference will provide a remarkable opportunity for all segments of the industry to meet and discuss the many topics affecting the industry. Emphasis will also be placed on the market conditions and what role secondary plays in the overall lead market. wwwsecondaryleadconference.com



16th Asian Battery Conference and Exhibition, 8 - 11 September 2015, Centara Grand @ CentralWorld and Bangkok Convention Centre. 16ABC will see the largest and most important assembly of battery industry experts gather in Bangkok for what is the premier lead battery industry event in Asia. Participate in a sparked-up show with an interactive and lively exhibition, a program that showcases presentations from global experts in battery technology, science and business and ramped-up social events. www.asianbatteryconference.com

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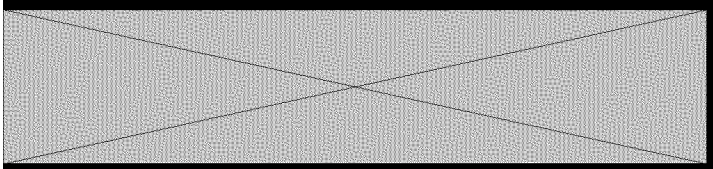
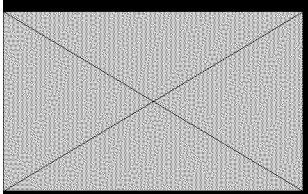
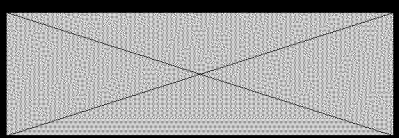
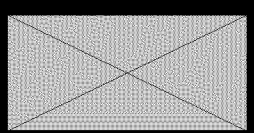


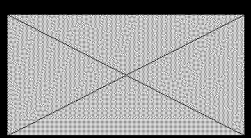
Taking place September 15-17, 2015, in Novi, Detroit, Michigan, The Battery Show 2015 is the premier showcase of the latest advanced battery technology. The exhibition hall offers a platform to launch new products, make new contacts and maintain existing relationships. With more qualified buyers and decision makers than any other event in North America, The Battery Show 2015 is the key to unlocking your future business opportunities.

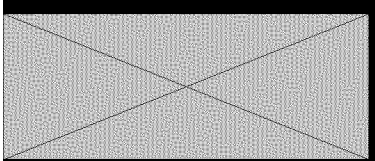


Join the only technical conference where the automotive and renewable industries come together to ensure business growth. With the growth of the electric vehicles' market and the shift to cleaner energy, batteries have become the common denominator for the automotive and renewable industry. Take this unique opportunity to meet experts from around the world. Visit the website for more information.



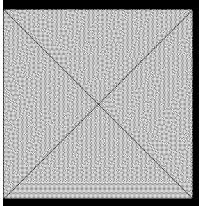




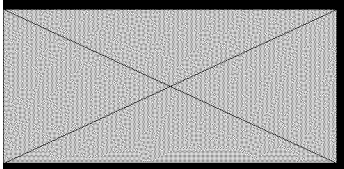


The 2nd edition of the World Electric & Hybrid Boat Summit will take place from 30th September till 2nd October 2015 in Amsterdam, followed by a study tour in Friesland. RingRoad aims at providing a premier & high quality global platform to foster

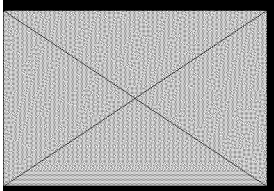
exchange of views and development of synergies between players in the field of electric & hybrid boats for sport and inland water transportation. Info

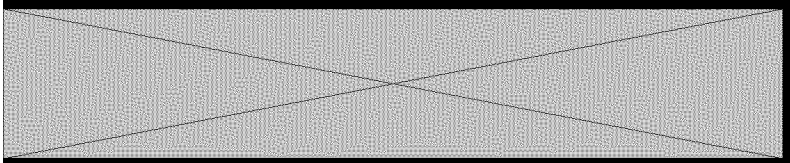


"Battery Shanghai" is organized by China Indu



Batteries 2015 is taking place 7-9 October 2015, Nice France. Christophe Pillot will be also handling his 2nd edition of his tutorial on "The Rechargeable Battery Market: value chain and main trends 2014 - 2025" on October 6th 2015. Batteries 2015 will include 3 days of technical sessions with 70 high level speakers, poster sessions, networking cocktail & dinner and a 2000 m² exhibit area. Contact : Sonia Jouneau - Tel : +33 1 41 34 21 75 - Email : sjouneau@lepublicsysteme.fr

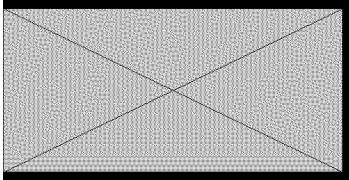




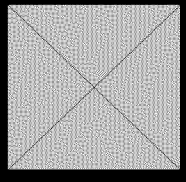
http://hydrogen.sk.ru/en/

International Conference on Energy Storage & Hydrogen Technology - 2015, 14 - 15 October, 2015, Moscow, Russia, Held over two days at Skolkovo, Conference incorporates lively debates, interactive startup exhibition, and startup pitch sessions. Event aims to develop cooperation between wide range of participants including international industrial companies, venture capital firms, research organizations, developers and manufacturers of energy storage systems and independent teams of inventors. Number of innovative companies will present

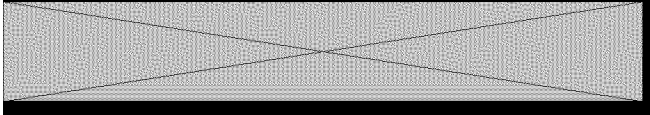
innovative products and technologies in the field of energy storage and hydrogen technology.



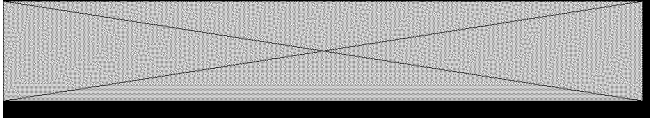
www.interbattery.or.kr

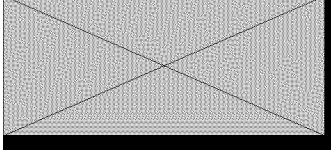


This year, the World Mobility Conference takes place alongside the eCarTec Munich 2015 and MATERIALICA 2015 trade fairs from October 20 - 22, 2015 (at Messe Munchen). On 22 October, 2015 from 9:00 am - 05:00 pm the conference agenda will include a session about Electric Vehicle Batteries with 12 leading speakers on the topics of electric vehicles and electric vehicle batteries. It will be moderated by Mr. Shmuel De Leon from Shmuel De Leon Energy. Further information available at

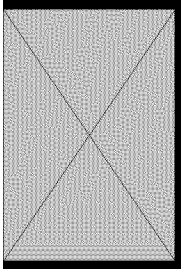


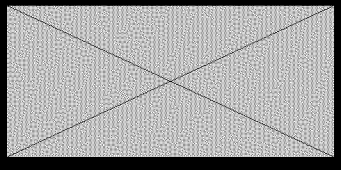
Part 1 of



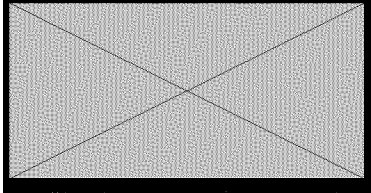


Fuel Cell Seminar and Energy Exposition - November 16-19, 2015



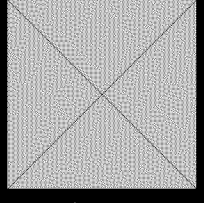


ees™ is the international exhibition series for batteries, energy storage systems and innovative production. ees Europe is Europe's largest energy storage event taking place in Munich in conjunction with Intersolar Europe on June 10-12, the world's leading exhibition for the solar industry. Furthermore ees™ North America and ees India are highlighted as Special Exhibitions at the Intersolar events in San Francisco on July 14-16 and Mumbai on November 18-20 - the major platforms for energy storage technologies reshaping the energy sector.



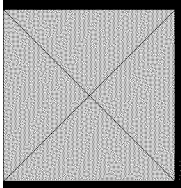
The 4th edition of the European Electric & Hybrid Vehicle Congress will take place from 1st to 4th December 2015 in Brussels. With over 200 presentations to be made, EEVC 2014 strengthens its position as global platform to foster exchange of views between the researchers, the industry, the authorities, the end users and the NGO's in the field of eMobility.

Info: www.eevc.eu ,

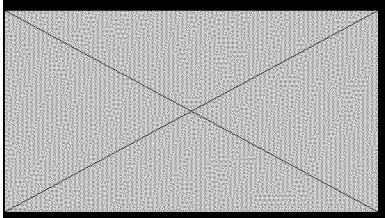


Energy Storage India (ESI) is the leading conference and expo addressing the need for energy storage and microgrid solutions in India. The 3rd International Conference & Exhibition, which is

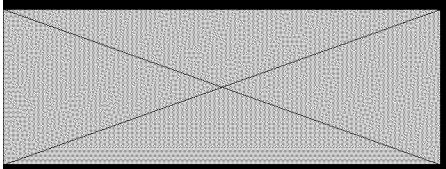
scheduled from December 09 - 09, 2015 along with a Pre-Conference workshop on December 07, 2015 at India Habitat Centre, New Delhi. The 3-day conference program would be concentrating on interactive markets with the topic "New Era for India's Energy Infrastructure through Energy Storage and Microgrids" . Url



European Fuel Cell Technology & Applications Piero Lunghi Conference - EFC16 16-18 December 2016, Naples (Italy). This breakthrough conference offers three full days where the following topics are focused: Materials, Modeling, Lab Tests, System Design, Fuels and decarbonizing society, FC Applications, FC operated in reversed mode, Marketing and Policy pathways to full commercialization of FC, Cross-cutting issues, New ideas and bad ideas in FC, Safety, Regulations codes & standards in FC, Microbial Fuel Cells, Dissemination of European projects on Fuel Cell and Hydrogen. www.europeanfuelcell.it



The 2016 NAATBatt Annual Meeting & Conference will be held on February 29 – March 3, 2016, at the Hyatt Regency Indian Wells resort. The meeting includes the Advanced Battery Golf & Tennis Tournament and covers developments in the business of electrochemical energy storage across applications and business sectors. Updates on market and technology trends in vehicle batteries, ESS and thin film batteries will be presented. Contact: James Greenberger, (517) 580-0685, or jgreenberger@naatbatt.org http://naatbatt.org/naatbatt-annual-conference



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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Auto Market Weekly - SearchAutoParts.com
Sent: Fri 8/21/2015 12:00:00 PM
Subject: Technician arrested for manslaughter after improper inspection

Auto Market Weekly:
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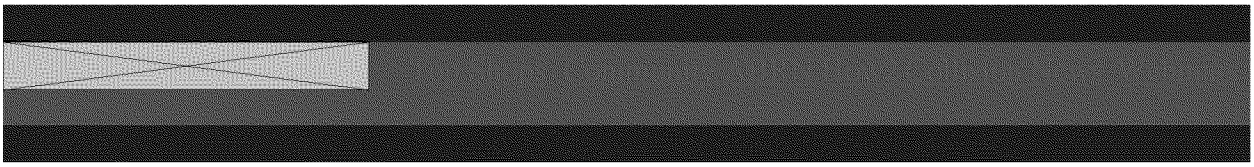
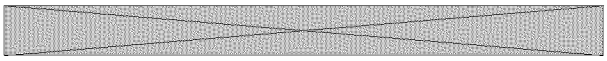
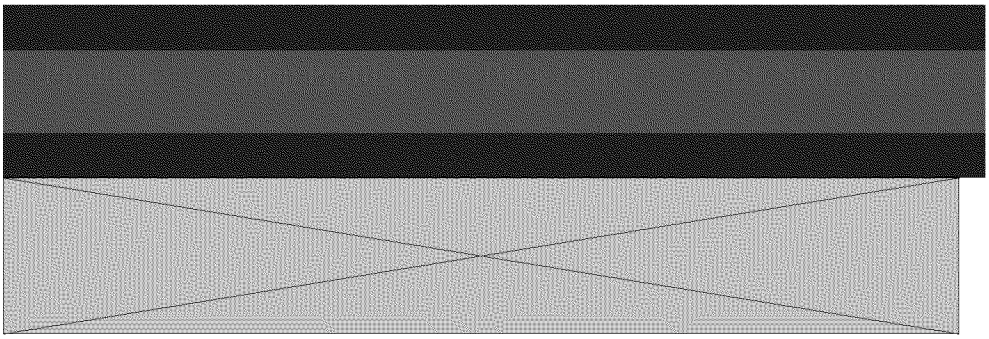


August 21, 2015





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http://www.searchautoparts.com/abrn/collision-news-general/enter-2014-abrn-top-shops-contest
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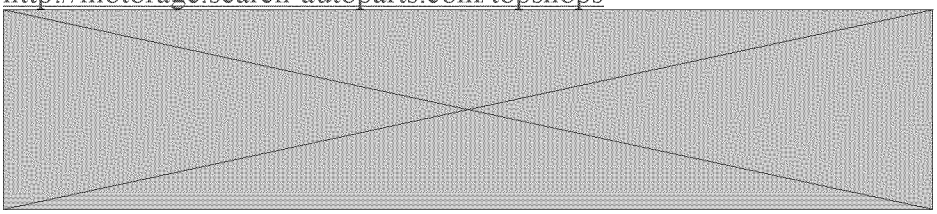

IN THIS ISSUE

- **Tech arrested after inspection**
- **Fire at Arch Auto Parts**
- **Developing standard operating procedures**
- **Service departments post record revenues**

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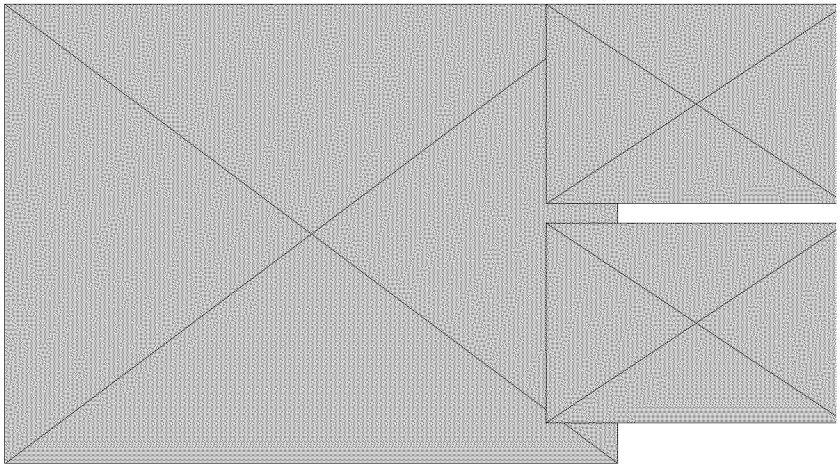
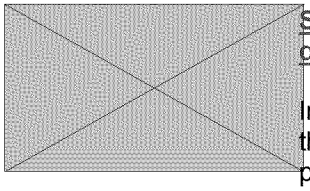
CARSTAR Russom's Collision Dyersburg, Tennessee



Seeking ongoing growth in small-town Tennessee by applying the latest technologies, in 2013 Brad and LaDona Russom opened a second shop amid plans to continue contemplating a third location.

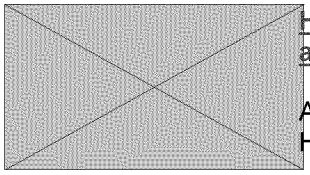
Read more

Featured Videos:



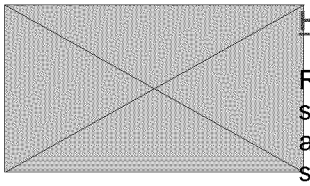
Servicing and inspection of accessory drive systems

In this edition of The Trainer we turn to the experts for the latest advice on the proper care and servicing of today's accessory drive systems.



Hunter Engineering 70-second alignment drill

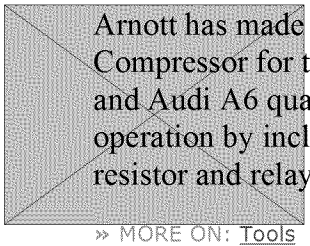
A demonstration of Hunter Engineering's HawkEye Elite wheel alignment system.



HD PowerSmoke-1

Redline Detection President Zack Parker shows technicians how to find wind, water and exhaust system leaks in heavy-duty systems.

Air suspension compressor



Arnott has made the installation of the Air Suspension Compressor for the 1999 through 2005 Audi allroad quattro and Audi A6 quattro (C5 Chassis) a simple 'Plug & Play' operation by including a new wiring harness with thermal resistor and relay. **More...**

» MORE ON: Tools

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- Inside the mind of the final decision maker
- Developing and maintaining standard operating procedures
- Pete Meier featured in On Point podcast
- Raybestos Partners with Schwartz Performance to Restore Classic '69 Mustang Fastback
- AWDA calls for industry awards nominations

News

- Technician arrested for manslaughter after lacking inspection
- Arch Auto Parts discovers fire; renovated store unfazed by emergency
- Dealer service departments post record revenues in 2014
- Global business is good, top aftermarket exporters say
- Uni-Select announces Q2 2015 financial results

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To: Ex. 7 @vw.com]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]
From: Bunker, Byron
Sent: Fri 8/21/2015 12:15:22 PM
Subject: Time to talk today?

Hi Ex. 7

If you can spare 20 minutes today, I would like to follow up on a conversation that you had with Linc. My calendar is mostly open today with only a few internal meetings. Please let me know if there is a convenient time to talk, and I will give you a call.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ex. 7 @vw.com]
Sent: Wednesday, March 06, 2013 11:13 AM
To: Bunker, Byron
Subject: Fuel Economy Testing Correlation

Hello Byron,

Hey, I just wanted to say thanks for the conversation we had concerning fuel economy testing. I've continued to think about it and wanted to make an additional point that maybe wasn't so clear during the discussion.

Ex. 4 - CBI

Ex. 4 - CBI

Hope that helps if you have further internal discussions.

Thanks again,

Ex. 7

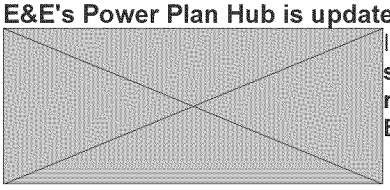
Ex. 4 - CBI

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: E&E Publishing
Sent: Fri 8/21/2015 12:17:43 PM
Subject: August 21 -- ClimateWire is ready

Read today's ClimateWire on the web

AN E&E PUBLISHING SERVICE

E&E's Power Plan Hub is updated



If you haven't checked it out, **E&E's updated Power Plan Hub features revised state goal information, Clean Power Plan fact sheets and summaries of reactions from political leaders, state officials and industry interests. Go to E&E's Power Plan Hub.**

CLIMATEWIRE — Fri., August 21, 2015

READ FULL EDITION

1.ENERGY EFFICIENCY:

Will zero-net-energy homes be the wave of the future?

WOODLAND, Calif. -- Marisol Sanabria points to a small white device about the size of her palm encased in a hard clear plastic box. Mounted on the wall above a kitchen countertop between a blender and a gleaming stainless steel toaster, the device, which emits a soft purple glow from one side and red glow on the other, is the only visible piece of evidence that shows Sanabria and her family of five live in a home designed to produce as much energy as it uses, also known as a zero-net-energy home.

2.REGULATION:

Calif. engaging in carbon-trading discussions with other Western states

SACRAMENTO, Calif. -- California's top climate policymaker said yesterday that she is urging other Western states to use carbon trading to comply with President Obama's Clean Power Plan.

TODAY'S STORIES

3.RENEWABLE ENERGY:
Massive solar projects in U.S., Chile move ahead

4.EXTREME WEATHER:
After a decade without big hurricanes, meteorologists urge planners not to get complacent

5.ADAPTATION:
Rebuilding La.'s coastal zone as a storm buffer attracts experts from vulnerable countries

6.AUTOS:
Audi to launch electric SUV, start production in 2018

7.ADVOCACY:
Mainers push for EPA rule with NWF report on climate risks to waterways

8.STATES:
Clergyman, politician join forces to push for emission cuts in Mont.

9.CALIFORNIA:
L.A. officials prepare for heavy possible flooding from El Niño

10.SPECIES:
Early climate change helped drive dog evolution -- study

11.PEOPLE:
USGS scientist slams 'disturbing' climate positions of Australian politicians

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From: Automotive News
Sent: Fri 8/21/2015 12:49:54 PM
Subject: A.M. NEWSCAST: Toyota taps Takata rival | A plus for Honda Pilot | Cadillac's diesel plan | VW Phaeton delayed - report | Model T's return trip | Pope to ride in a Wrangler

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From: Automotive News
Sent: Fri 8/21/2015 12:50:08 PM
Subject: A.M. NEWSCAST: Toyota taps Takata rival | A plus for Honda Pilot | Cadillac's diesel plan | VW Phaeton delayed - report | Model T's return trip | Pope to ride in a Wrangler

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Morning Transportation
Sent: Fri 8/21/2015 2:02:03 PM
Subject: POLITICO's Morning Transportation: Feds launch gyrocopter-detection test — DOT divulges truck parking findings — U.S. driving hits historic high — FAA gets flak for close-call drone report

By Jennifer Scholtes

With help from Lauren Gardner

FEDS LAUNCH GYROCOPTER-DETECTION TEST: DoD's aerospace arm will test its gyrocopter-detecting skills this weekend, after mistaking the small aircraft that infamously landed on the Capitol lawn this spring for something inconsequential like a kite or balloons. NORAD will launch the exercise - dubbed Falcon Virgo 15-13 - on Sunday morning, sending four gyrocopters and ultralights into D.C.-area skies. While the public might get a glimpse at the aircraft, don't expect to see NORAD practicing a takedown. "Military aircraft will not be visible for this exercise and at no time during the exercise will NORAD assets attempt to intercept the aircraft," the agency advises.

These NORAD training exercises happen now and then. But this one is extra special, of course, since lawmakers have pressured the agency to improve its ability to pinpoint low-altitude and slow-speed aerial vehicles flying in the capital region. Congressional leaders were expectedly astonished that NORAD, the FAA, the Secret Service and the National Park Service police were all oblivious to the gyrocopter that traveled for about 30 miles in restricted airspace and down the National Mall before the Florida mailman who was piloting the mini-aircraft safely landed it on Capitol grounds in April.

Birds and balloons: NORAD and the other federal agencies that were totally clueless to the gyrocopter have argued that the miss is not a reflection of their incompetence but of the fact that it's just really hard to identify aircraft that small. Northern Command chief Adm. William Gortney told lawmakers in April that NORAD is "working against physics" because the radar system is "only capable down to a set of characteristics ... based on speed and based on size." And FAA Administrator Michael Huerta said the blip the gyrocopter produced was indistinguishable from the "small dots" of non-aircraft radar tracks marking "flocks of birds, weather events, or occasional kites or balloons."

A refresher on the congressional inquisition that followed the gyrocopter's landing: http://politico.pro/1J8rUjt.

IT'S FRIDAY: Good morning and thanks for reading POLITICO's Morning Transportation, your daily tipsheet on trains, planes, automobiles and ports.

Reach out: jscholtes@politico.com or @jascholtes.

"Just a quarter-mile, and I'll smoke you good, in my 455 Rocket - the kind the po-lice drive." http://bit.ly/1PCDdD4

DOT DIVULGES TRUCK PARKING FINDINGS: DOT will detail the results this morning of its survey on truck parking shortages, as Congress mandated in 2012 through MAP-21. The Wall Street Journal posted some of the survey's findings early this morning, reporting that DOT found that more than 75 percent of truck drivers surveyed and nearly 66 percent of logistics personnel said they regularly had a hard time finding safe places to park and rest. And 90 percent said they found it difficult to locate safe parking at night. WSJ's Betsy Morris reports (http://on.wsj.com/1E7PGgv) that "unofficial or illegal truck parking places have become so common that safety officials in 48 states reported they could identify the locations. Officials in 11 states could identify 11 or more places, according to the study. Nearly half the time those ad hoc locations were freeway ramps; 27 percent of the time freeway shoulders and 20 percent of the time they were parking lots, it found."

Jason's Law: If you can think back that far, MAP-21 didn't actually create a truck parking program. But it allowed some transportation grants to be applied toward construction of safe truck parking areas and the opening of existing facilities to truck parking. While Congress never cleared a standalone bill, the MAP-21 provisions are sometimes referred to as "Jason's Law" language, since there was a push to improve truck parking after trucker Jason Rivenburg was murdered in 2009 while resting at an empty gas station.

U.S. DRIVING HITS HISTORIC HIGH: Vehicles on U.S. roads traveled 1.54 trillion miles in the first half of this year, beating the previous record of 1.5 trillion from 2007. The Federal Highway Administration said in a statement Thursday that the new number "is more than double the amount driven during the same period in 1981, continuing a trend of America's driving mileage doubling nearly every generation." The agency says Hawaii has seen the most dramatic increase in driving, while Northeastern states have experienced a much slighter uptick. Check out all the data in FHWA's monthly report on traffic volume trends: http://1.usa.gov/WHhJPR.

FAA GETS FLAK FOR CLOSE-CALL DRONE REPORT: Pointing to new reports of drones nearly colliding with planes hundreds of times this year, Sen. Richard Blumenthal is throwing blame at the FAA this week, saying that the agency's delays in finalizing flight rules "portend the continuing, unimpeded proliferation of drones alongside passenger planes, helicopters, and other traditional users of airspace." The Washington Post wrote (http://wapo.st/1KxWEbL) Thursday that pilots have reported nearly 700 incidents this year involving drones that almost hit planes. The newspaper cited "several hundred" of those close-call reports it acquired from a government official who disagreed with the FAA's decision to withhold the information from the public.

'Horror and havoc': In a letter Thursday to FAA Administrator Michael Huerta, Blumenthal urged the agency to "take aggressive action" to protect everyone who relies on safe skies. "As you take administrative and regulatory steps to satisfy congressional requirements, I also call on your agency to take strong and swift enforcement steps immediately against anyone endangering the skies," the senator wrote. "It is incumbent on your agency to use your enforcement powers to stop activity that could result in the horror and havoc of a downed passenger plane or similar tragedy." That correspondence: http://1.usa.gov/1MBq90N.

Watchdogging: DOT's inspector general announced Thursday that the office plans to audit the

FAA's approval and oversight process for drones, "given the significant and complex challenges of safely integrating UAS into the National Airspace System and the increasing number of UAS operations." And Blumenthal's letter and the divulgence of the close-call data comes a day after Sen. Chuck Schumer committed to offering an amendment to whatever FAA reauthorization measure Congress passes this fall to require the agency to mandate that drones include software to prohibit them from flying too high or over sensitive areas: http://politico.pro/1NmfJUc.

SENATORS CALL FOR EVEN MORE MASSIVE TAKATA RECALL: It's time to stop troubleshooting with deadly Takata airbags and recall every vehicle with one installed, Sens. Richard Blumenthal and Ed Markey are insisting, pointing to revelations that a Takata side airbag in a 2015 model year Volkswagen Tiguan ruptured in a way that could have been lethal. Our Kathryn A. Wolfe explains that "the accident opens two new fronts in the ongoing airbag saga - first, it involved a new model car; and second, it involved a side airbag. Previous recalls implicated mostly older model cars subjected to heat and humidity, and also only involved driver front airbags."

More from Kathy: http://politico.pro/1U2lc1E. The letter the senators sent Thursday to a top Takata official: http://1.usa.gov/1LmiT7b. The Detroit News story on the Volkswagen accident: http://bit.ly/1NyVpOP.

AVIATION EMPLOYMENT CONTINUES TO RISE: U.S. airlines employed 3 percent more workers this June than the same month in 2014, making it the highest monthly airline employment total in nearly seven years, DOT's Bureau of Transportation Statistics reported this week. The June increase marks the 19th consecutive month that airline employment has exceeded the same month in the previous year. Low-cost carriers like Southwest have seen the highest year-to-year increase in employment with a 4.9 percent jump, followed by the five network airlines at 3.1 percent and the 12 regional carriers at 0.1 percent.

UNIONS ASK T&I TO SHUN SENATE HAIR TESTING PROPOSAL: Transportation unions are urging House T&I leaders to break from the Senate stance on hair testing provisions the upper chamber included in its multiyear transportation funding bill. "The Senate has undermined the expertise of scientists and potentially jeopardized the jobs of thousands of bus and truck drivers with this unproven testing method," AFL-CIO Transportation Trades Department President Edward Wytkind said in written statement on Thursday. "We urge the House to reject the Senate's hair testing provision and ensure that federal drug tests are backed by scientific and forensically sound evidence. Nothing less should be acceptable."

The divergence: The multiyear transportation plan the Senate passed in late July would allow companies that employ commercial drivers to use hair samples for drug testing rather than urine analysis. Proponents say hair testing is more effective because drugs stay longer in hair than urine, while opponents say darker and more porous hair retains drugs at a greater rate and can absorb drugs in the environment. Read the letter the AFL-CIO's transportation branch signed with 17 other groups: http://bit.ly/1K9PTks.

MOVING ON UP:

- House T&I subcommittee counsel Fred Miller has been promoted to staff director for the Subcommittee on Railroads, Pipelines, and Hazardous Materials. Miller joined the committee just over four years ago and was an attorney-adviser for the STB before that, as well as attorney-adviser for the Administrative Office of the U.S. Courts, with a focus on infrastructure and security. Chairman Bill Shuster said in a written statement on Thursday that Miller has been "integral to our work, including the development of the Passenger Rail Reform and Investment Act, and I am pleased that he will be leading our staff as we continue our efforts to improve and reform passenger rail service in the United States." http://politico.pro/1JneT76

- Brookings has just added five nonresident experts to its Metropolitan Policy Program, including Lynn Broaddus, who is president of Broadview Collaborative Inc., where she focuses on transportation issues among many other topics. The think tank has also scored Derek Douglas, who is vice president of civic engagement at the University of Chicago, where his work includes international urban development issues.

THE AUTOBAHN (SPEED READ):

- Mayor de Blasio raises prospect of removing Times Square pedestrian plazas. The New York Times: http://nyti.ms/1K9Q9A5

- Drones banned from Philadelphia skies for pope's visit. Reuters: http://reut.rs/1U2GtYU

- Court says minimum wage increase applies to airport workers. AP: http://abcn.ws/1JlTUx6

- Walkability comes to the American West. CityLab: http://bit.ly/1MzWHIw

- Oakland port proposes trucking fees to fight congestion. The Wall Street Journal: http://on.wsj.com/1Juw6gQ

THE COUNTDOWN: Highway and transit policy expires in 70 days. DOT appropriations run out and the FAA reauthorization expires in 42 days. The 2016 presidential election is in 448 days.

DEBRIEF FRIDAY PREVIEW: Every Friday, the Agenda's Debrief catches you up on the policy conversation for the week ahead. In two minutes. This week on the Friday Preview: the EPA's water play, Obama's climate pitch, and campaign policy heats up. Watch it here: http://www.politico.com/agenda-video/

Home of the Nation's Most Successful Trash Incinerator: The sheer volume of trash that Americans throw out overwhelms the efforts of most municipalities, but not Minneapolis. What could have been the city's biggest, smelliest and potentially most dangerous eyesore, has become something entirely unique in American waste management: the heart of the city's most desirable neighborhood. Read more in the latest installment of POLITICO Magazine's What Works: http://politi.co/1NpgvQv

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http://www.politico.com/morningtransportation/0815/morningtransportation19716.html

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==========.

To: ross.gatzke@porsche.us[ross.gatzke@porsche.us]
Cc: walter.lewis@porsche.us[walter.lewis@porsche.us]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Fri 8/21/2015 2:32:35 PM
Subject: re: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide
Porsche_2016 FE Guide-all rel dates-no-sales-8-20-2015.xlsx

Ross,

re: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Attached are the data in Verify as of August 20, 2015 6AM. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov or included in the 2016 Printed Guide. Note that there are separate tabs for EV, PHEV, and fuel cell vehicles (if applicable). Please make any needed corrections to Verify when you get a chance. Please enter new data in Verify for any missing labels.

-

Printed Guide – For the 2016 Printed Guide, I will send all error-free data in Verify to DOE on September 2, 2015, regardless of release date. The data will not be released outside of EPA & DOE offices until the week of November 16, 2015, when 2016 Printed Guides are scheduled to be mailed to dealerships, libraries and credit unions, ref. EPA guidance letter CD-15-16, July 20, 2015. Please email me if there are data in Verify which you do not want included in the 2016 Printed Guide.

Next Web Update - The next normal posting of 2015 & 2016 FE Label data will be on August 25, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later). Again on September 2, 2015, I'll send the error-free data in Verify (which is releasable) to DOE to update www.fueleconomy.gov, business-as-usual.

Using the 2017 Derived 5-Cycle Equation for 2016MY Vehicles: If you are voluntarily using the 2017 derived 5-cycle equations for any 2016 model year vehicles, please send me the 2016 Index number(s) of the affected vehicles so I can build them into the macro. See EPA Guidance Letter CD-15-15, June 22, 2015 for additional information about the revised derived 5-cycle equation.

Placeholders for the 2016 Printed Guide are due to EPA on Aug 20, 2015: If you haven't already done so, please send me an Excel spreadsheet with any fuel cell vehicles, EVs, HEVs, PHEVs, FFVs and any other alternative fuel vehicles which won't be labeled in Verify by September 1, 2015. [Please don't

include placeholder information for vehicles which are already in EPA's Verify database (or will be in Verify by September 1, 2015).] See Enclosure 2, Section 3 of EPA Guidance letter CD-15-16 for additional information about placeholders.

Reminders:

•□□□□□□□□ Please double check the attached data in Verify for errors, missing labels, etc.

•□□□□□□□□ September 1, 2015 is the last day to make changes for the 2016 Printed Guide.

•□□□□□□□□ If you enter new label data into Verify before September 2, 2015, please double check it carefully for accuracy.

Please send me a short email when your 2016 FE Label data in Verify are "good to go."

Please send me your placeholder spreadsheet as soon as possible.

Thanks

Dave

2011 and Later PHEVs - data in EPA's Verify data base - plus driv

(Not Confidential)

2016 Model Year:

EPA Comments	Model Type Information					
EPA commVERIFY co	Model Yr	Mfr Name	Division	Carline	Verify Mfr	Index (Mo
PHEV; (non-blended) PHEV; (non-blended)	2016	Porsche	Porsche	Cayenne S e-Hybrid (Non-blended PHEV)	PRX	441
PHEV; (blended) PHEV; (blended)	2016	Porsche	Porsche	Panamera S E-Hybrid (Blended PHEV)	PRX	641

(Sorted by Division Name)

ing range & utility factor information

Index)	Eng Displ	# Cyl	Trans as I	Charge Sustaining Information (Gasoline Operation) City FE (G	Hwy FE (C	Comb FE	City Unad	Hwy Unad	Comb Una	City Unrd
							2016 Porsche Cayenne S e-Hybrid (PHEV)			
	3.0	6	Auto(AM8	21	24	22	26.3	33.5	29.1296	20.8
				21	24	22	26.3	33.5	29.1296	20.8
							2016 Porsche Panamera S E-Hybrid			
	3.0	6	Auto(AM-S	23	29	25	28.9	41.1	33.3555	22.7
				23	29	25	28.9	41.1	33.3555	22.7

Charge Sustaining Information (Gasoline Operation)						
Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Oth	# Gears	Trans Loc
24.1	22.1		SC	Supercharg	AM	Automated Manual		8	Y
24.1	22.1		SC	Supercharg	AM	Automated Manual		8	Y
29.3	25.2605		SC	Supercharg	AMS	Automated Manual- Selectable		8	Y
29.3	25.2605		SC	Supercharg	AMS	Automated Manual- Selectable		8	Y

Trans Cre	Drive Sys	Drive Des	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag	Fuel Unit	Fuel Unit I
2016 Porsche Cayenne S e-Hybrid (PHEV)									
N	A	All Wheel Drive			470	GP	Gasoline (F	MPG	miles per g
N	A	All Wheel I		10	470	GP	Gasoline (F	MPG	miles per g
2016 Porsche Panamera S E-Hybrid									
A	nual with	R	paddles)	2-Wheel D	10	540	GP	Gasoline (F	MPG	miles per g
A	nual with	R	paddles)	2-Wheel D	10	540	GP	Gasoline (F	MPG	miles per g

Vehicle Information				Ann Fuel Cost	
nventional Fuel Gas Guzzl	Gas Guzzl	2Dr Pass \	2Dr Lugg \	Annual Fu	EPA Calcu
					2016 Porsche Cay
nded)	Truck			1900	50
nded)	Truck			1900	2250
					2016 Porsche Pan
N nded)	Not exempt	108	16	1650	1650
N nded)	Not exempt	108	16	1650	1650

Mfr Comm	Charge Depleting Information (Electricity Operation)								
ntionalEfficCost - Conventional Fuel - - Annual fuel cost error. Please revise.Verify.									
Comment	City2 FE (Hwy2 FUE	Comb2 Fu	City2 Una	Hwy2 Una	Comb2 Un	City2 Unr	Hwy2 Unr	Cmb2 Unr	
enne S e-Hybrid (PHEV)									
All-Electric	70	69	69	50.8	50.7	50.9	69.8	69	69.4
All-Electric	48	46	47	65.5	66.2	65.8132	47.9	46.4	47
amera S E-Hybrid									
All-Electric	51	51	51	37	38	37.4	50.8	51.1	51
All-Electric	43	66	51	59.5	94	71.2	43.3	65.9	51

pleting Information (Electricity Operation)

Range2	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit	Fuel2 Ann	City CO2 I	Hwy CO2	Comb CO2	Fuel2 EPA
					2016 Porsche Cayenne S e-Hybrid (PHEV)				
14	EL	Electricity	KW-HR/10	kilowatt-h	1350				
14	EL	Electricity	MPG	miles per g	1350				
					2016 Porsche Panamera S E-Hybrid				
16	EL	Electricity	KW-HR/10	kilowatt-h	1650				
16	EL	Electricity	MPG	miles per g	1650				

General Information							
Added Annual Fuel Cost - Alternative Fuel							
Descriptor	Intake Val	Exhaust V	Carline Cl	Carline Cl	Car/Truck	Calc Appr	Release D	EPA FE La
SIDI; PHEV	2	2	33	Standard SUV 4WD	Plug-in Hyl	7/23/2015	18377	
SIDI; PHEV	2	2	33	Standard SUV 4WD	Plug-in Hyl	7/23/2015	18377	
SIDI; PHEV	2	2	6	Large Cars car	Plug-in Hyl	7/23/2015	18376	
SIDI; PHEV	2	2	6	Large Cars car	Plug-in Hyl	7/23/2015	18376	

ıtion, etc.

date is after 8/2/2012)

Unique La	Label Rec	Relabel	Relabel D	Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve
	2016 Porsche Cayenne S e-Hybrid (PHEV)								
Y	N		N	N	N		N		Y
Y	N		N	N	N		N		Y
	2016 Porsche Panamera S E-Hybrid								
Y	N		N	N	N		N		Y
Y	N		N	N	N		N		Y

mation - Engine, Motor/Generator, Battery Information, etc.

General Hybrid Vehicle Information - Engine, Motor/Generator, Battery Information, etc.

?	Var Valve	Var Valve	Var Valve	Energy St	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Energ
								2016 Porsche Cayenne S e-Hybrid (PHE		
	Porsche V\Y		Porsche V\Battery(s)			1	Lithium Ion		471	75
	Porsche V\Y		Porsche V\Battery(s)			1	Lithium Ion		471	75
								2016 Porsche Panamera S E-Hybrid		
	Porsche V\Y		Porsche V\Battery(s)			1	Lithium Ion		471	75
	Porsche V\Y		Porsche V\Battery(s)			1	Lithium Ion		471	75

etc.

Batt Spec	Batt Char	Comment	# Capacit	Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2
ac(s/Amp-hrs) V)									
67.1	Both	On-Board and Off-Board		Electrical	Regen Brake	Both	N		
67.1	Both	On-Board and Off-Board		Electrical	Regen Brake	Both	N		
67.1	Both	On-Board and Off-Board		Electrical	Regen Brake	Both	N		
67.1	Both	On-Board and Off-Board		Electrical	Regen Brake	Both	N		

General Hybrid Vehicle Information - Engine, Motor/Generato							
Fuel Cell Capacity (kg)	PHEV-EV C	# Drive Mc	Motor Ger	Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete
		2016 Porsche Cayenne S e-Hybrid (PHEV)							
		1	DC Brushless		70		GDI		Spark Ignit
		1	DC Brushless		70		GDI		Spark Ignit
		2016 Porsche Panamera S E-Hybrid							
		1	DC Brushless		70		GDI		Spark Ignit
		1	DC Brushless		70		GDI		Spark Ignit

on - Engine, Motor/Generator, Battery Information, etc.

Fuel Cell V	Off Board	Camless V	Oil Viscosi	Stop/Start	Stop/Start	Model Typ	Charge De	Charge De	Charge Sus
ect Injection	N	N	0W40	Y	Yes		CD-2C	Charge De	CS-2C
ect Injection	N	N	0W40	Y	Yes		CD-2C	Charge De	CS-2C
ect Injection	N	N	0W40	Y	Yes		CD-2C	Charge De	CS-2C
ect Injection	N	N	0W40	Y	Yes		CD-2C	Charge De	CS-2C

			FE & GHG Rating		#1 Smog Rating Test Group
Charge Sustaining 2-cycle (PHEV only)	MFR Calcu	EPA Calcul	FE Rating (GHG Ratin	GHG 1-10	#1 Smog R
2016 Porsche Cayenne S e-Hybrid (PHEV)					
Charge Sustaining 2-cycle	29.7		6	8	GPRXJ03.0
Charge Sustaining 2-cycle	29.7		6	8	GPRXJ03.0
2016 Porsche Panamera S E-Hybrid					
Charge Sustaining 2-cycle	31.4		7	9	GPRXJ03.0
Charge Sustaining 2-cycle	31.4		7	9	10 GPRXJ03.0

#1 Smog Rating Test Group				#2 Smog Rating Test Group				#3 Smog Rating Test Group		
#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay (EPA Determined)	#2 Smog R	#2 Mfr Sm	#2 EPA Sm	SmartWay	#3 Smog R	#3 Mfr Sm	#3 EPA Sm
								2016 Porsche Cayenne S e-Hybrid (PHEV)		
5										
5										
								2016 Porsche Panamera S E-Hybrid		
5										
5										

ng Test Group	#4 Smog Rating Test Group	You Save/You Spend		Gasoline Adjusted CO2		
		$ You Save	$ You Spe	City CO2 R	Hwy CO2 R	Comb CO2
			500	0	0	0
			500	425	367	399
		750		71	0	39
		750		392	303	352

		PHEV Total				New fields added by D. Good		
PHEV	Battery Charge Time	Range	PHEV Composite MPG			PHEV Composite CO2		
[illegible]	[illegible]	[illegible]	City PHEV	Hwy PHEV	Comb PHE	City CO2-P	Hwy CO2-I	CO2-PHEV
	2016 Porsche Cayenne S e-Hybrid (PHEV)							
260	3	480	25	28	27	274.4	242.3	260
260	3	480				274.4	242.3	260
	2016 Porsche Panamera S E-Hybrid							
229	3	560	28	36	31	260.244	191.465	229
229	3	560				260.244	191.465	229

New fields added by D. Good

Charge Depleting Driving Range			Individual Utility Factors (Rcda PHEV Ch			Charge Depleting Fuel Consumption			Actual Tank
[illegible]	[illegible]	[illegible]	City Utility	Hwy Utility	Comb Utility	City (gal/1	Hwy (gal/1	Combined	Size (gal)
			2016 Porsche Cayenne S e-Hybrid (PHEV)						
14.27	13.92	14	0.371	0.361	0.366	0	0	0	21.1
Electric Range = 14 miles (combined)			0.371	0.361	0.366				21.1
			2016 Porsche Panamera S E-Hybrid						
16.64	15.6	16	0.402	0.384	0.394	0.8339	0.0003	0.5	21.1
All Electric Range = 0-15 miles (combined)			0.402	0.384	0.394				21.1

sted on blended PHEV labels

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr Index (Mo	Eng Displ	# Cyl
		2016 Porsche	Porsche	911 Carrer	PRX 102	3.4	6
		2016 Porsche	Porsche	911 Carrer	PRX 101	3.4	6
		2016 Porsche	Porsche	911 Carrer	PRX 110	3.4	6
		2016 Porsche	Porsche	911 Carrer	PRX 109	3.4	6
		2016 Porsche	Porsche	911 Carrer	PRX 112	3.4	6
		2016 Porsche	Porsche	911 Carrer	PRX 111	3.4	6
		2016 Porsche	Porsche	911 Carrer	PRX 126	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 125	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 128	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 127	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 114	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 113	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 116	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 115	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 104	3.4	6
		2016 Porsche	Porsche	911 Carrer	PRX 103	3.4	6
		2016 Porsche	Porsche	911 Carrer	PRX 122	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 121	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 124	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 123	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 106	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 105	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 108	3.8	6
		2016 Porsche	Porsche	911 Carrer	PRX 107	3.8	6
		2016 Porsche	Porsche	911 GT3	PRX 531	3.8	6
		2016 Porsche	Porsche	911 GT3RS	PRX 532	4.0	6
		2016 Porsche	Porsche	911 Targa	PRX 542	3.4	6
		2016 Porsche	Porsche	911 Targa	PRX 540	3.4	6
		2016 Porsche	Porsche	911 Targa	PRX 546	3.8	6
		2016 Porsche	Porsche	911 Targa	PRX 545	3.8	6
		2016 Porsche	Porsche	911 Targa	PRX 544	3.8	6
		2016 Porsche	Porsche	911 Targa	PRX 543	3.8	6
		2016 Porsche	Porsche	911 Turbo	PRX 521	3.8	6
		2016 Porsche	Porsche	911 Turbo	PRX 523	3.8	6
		2016 Porsche	Porsche	Boxster	PRX 202	2.7	6
		2016 Porsche	Porsche	Boxster	PRX 201	2.7	6
		2016 Porsche	Porsche	Boxster GT	PRX 224	3.4	6
		2016 Porsche	Porsche	Boxster GT	PRX 223	3.4	6
		2016 Porsche	Porsche	Boxster S	PRX 222	3.4	6
		2016 Porsche	Porsche	Boxster S	PRX 221	3.4	6
		2016 Porsche	Porsche	Boxster Sp	PRX 225	4.0	6
		2016 Porsche	Porsche	Cayenne	PRX 401	3.6	6
Diesel;		2016 Porsche	Porsche	Cayenne D	PRX 431	3.0	6
		2016 Porsche	Porsche	Cayenne G	PRX 412	3.6	6

2016	Porsche	Porsche	Cayenne S	PRX	411	3.6	6
2016	Porsche	Porsche	Cayenne T	PRX	421	4.8	8
2016	Porsche	Porsche	Cayenne T	PRX	422	4.8	8
2016	Porsche	Porsche	Cayman	PRX	212	2.7	6
2016	Porsche	Porsche	Cayman	PRX	211	2.7	6
2016	Porsche	Porsche	Cayman G	PRX	235	4.0	6
2016	Porsche	Porsche	Cayman G	PRX	234	3.4	6
2016	Porsche	Porsche	Cayman G	PRX	233	3.4	6
2016	Porsche	Porsche	Cayman S	PRX	232	3.4	6
2016	Porsche	Porsche	Cayman S	PRX	231	3.4	6
2016	Porsche	Porsche	Macan S	PRX	311	3.0	6
2016	Porsche	Porsche	Macan Tur	PRX	321	3.6	6
2016	Porsche	Porsche	Panamera	PRX	601	3.6	6
2016	Porsche	Porsche	Panamera	PRX	602	3.6	6
2016	Porsche	Porsche	Panamera	PRX	616	3.0	6
2016	Porsche	Porsche	Panamera	PRX	617	3.0	6
2016	Porsche	Porsche	Panamera	PRX	621	4.8	8
2016	Porsche	Porsche	Panamera	PRX	611	3.0	6
2016	Porsche	Porsche	Panamera	PRX	631	4.8	8
2016	Porsche	Porsche	Panamera	PRX	632	4.8	8
2016	Porsche	Porsche	Panamera	PRX	636	4.8	8
2016	Porsche	Porsche	Panamera	PRX	637	4.8	8

Transmiss	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	20	28	23				25.6476	39.2484	30.386
Manual(M	19	27	22				24.1897	38.2499	28.9841
Auto(AM-S	20	28	23				25.4965	38.6494	30.1071
Manual(M	19	27	22				24.0491	37.8468	28.7688
Auto(AM-S	20	27	22				24.9475	37.5494	29.3854
Manual(M	19	26	22				23.5983	36.5997	28.0884
Auto(AM-S	19	26	21				23.3448	35.7997	27.678
Manual(M	18	26	21				22.6446	35.6975	27.1045
Auto(AM-S	18	25	21				22.549	35	26.8467
Manual(M	18	25	20				22.0408	35.0989	26.4728
Auto(AM-S	19	26	22				24.3491	36.8989	28.7492
Manual(M	19	26	21				23.3473	36.7494	27.9311
Auto(AM-S	19	26	21				23.6448	36.2483	28.0306
Manual(M	18	26	21				22.9996	35.8989	27.4358
Auto(AM-S	21	28	23				25.9904	39.4499	30.7045
Manual(M	19	27	22				24.0491	37.9499	28.7955
Auto(AM-S	19	26	21				23.3319	36.3499	27.8144
Manual(M	18	26	21				22.793	36.4997	27.428
Auto(AM-S	19	26	21				23.3448	35.7997	27.678
Manual(M	18	25	20				22.0408	35.0989	26.4728
Auto(AM-S	20	27	23				24.9451	37.8997	29.4795
Manual(M	19	27	22				23.8449	37.9484	28.6337
Auto(AM-S	19	27	22				24.2934	37.6976	28.921
Manual(M	19	27	22				23.6474	37.0494	28.2451
Auto(AM-S	15	20	17				18.2	28.3	21.6822
Auto(AM-S	14	20	16				17.9	27.5	21.236
Auto(AM-S	19	26	22				24.1	36.9	28.5578
Manual(M	18	26	21				23	36.5	27.5924
Auto(AM-S	18	25	21				23.1	35.4	27.3812
Manual(M	18	26	21				22.5	35.6	26.9652
Auto(AM-S	18	25	21				23.1	35.4	27.3812
Manual(M	18	26	21				22.5	35.6	26.9652
Auto(AM-S	17	24	20				21.4702	34.0997	25.7642
Auto(AM-S	17	24	20				21.4702	34.0997	25.7642
Auto(AM-S	22	32	26				27.9	44.9	33.6298
Manual(M	20	30	24				25.9	41.5	31.1731
Auto(AM-S	22	31	25				27.2967	43.0998	32.6906
Manual(M	19	26	22				24.3984	37	28.8146
Auto(AM-S	21	30	24				26.3	41.9	31.5932
Manual(M	20	28	23				24.8	38.5	29.5284
Manual(M	18	24	20				22.6	33.2	26.3918
Auto(S8)	19	24	21				23.8	33.8	27.4553
Auto(S8)	20	29	23				24.1	41	29.5883
Auto(S8)	16	23	19				20.2	31.6	24.1148

Auto(S8)	17	24	20	21.1	34.1	25.4694
Auto(S8)	14	21	17	17.5	29.1	21.3254
Auto(S8)	14	21	17	17.5	29.1	21.3254
Auto(AM-S	22	32	26	27.9	44.9	33.6298
Manual(M	20	30	24	25.9	41.5	31.1731
Manual(M	18	23	20	22.2	32.5	25.8927
Auto(AM-S	22	31	25	27.2967	43.0998	32.6906
Manual(M	19	26	22	24.3984	37	28.8146
Auto(AM-S	21	30	24	26.3	41.9	31.5932
Manual(M	20	28	23	24.8	38.5	29.5284
Auto(AM-S	17	23	19	21.7	31.9	25.3471
Auto(AM-S	17	23	19	20.9981	32.5	24.9756
Auto(AM-S	18	28	22	22.9368	39.0499	28.1669
Auto(AM-S	18	27	21	22.5783	37.5997	27.5271
Auto(AM-S	17	27	21	21.8941	37.2798	26.8876
Auto(AM-S	17	26	20	21.4772	36.9989	26.4753
Auto(AM-S	16	24	19	19.3871	33.7	23.9679
Auto(AM-S	17	27	21	21.8941	37.2798	26.8876
Auto(AM-S	15	24	18	19.1667	33.7481	23.7927
Auto(AM-S	15	24	18	18.9742	33.3	23.5293
Auto(AM-S	15	24	18	19.1667	33.7481	23.7927
Auto(AM-S	15	24	18	18.9742	33.3	23.5293

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
20.2894	28.0224	23.1662		NA	Naturally A	AMS	Automated Manual- Selectable	7	
19.2083	27.3364	22.1754		NA	Naturally A	M	Manual		7
20.1778	27.611	22.9592		NA	Naturally A	AMS	Automated Manual- Selectable	7	
19.1036	27.059	22.0164		NA	Naturally A	M	Manual		7
19.7713	26.8542	22.434		NA	Naturally A	AMS	Automated Manual- Selectable	7	
18.7674	26.1995	21.5137		NA	Naturally A	M	Manual		7
18.578	25.647	21.2085		NA	Naturally A	AMS	Automated Manual- Selectable	7	
18.0536	25.5764	20.8077		NA	Naturally A	M	Manual		7
17.9818	25.0939	20.6104		NA	Naturally A	AMS	Automated Manual- Selectable	7	
17.5998	25.1624	20.3524		NA	Naturally A	M	Manual		7
19.3269	26.4059	21.9783		NA	Naturally A	AMS	Automated Manual- Selectable	7	
18.5799	26.3028	21.4085		NA	Naturally A	M	Manual		7
18.8021	25.9569	21.4645		NA	Naturally A	AMS	Automated Manual- Selectable	7	
18.3197	25.7156	21.0431		NA	Naturally A	M	Manual		7
20.5425	28.1607	23.3899		NA	Naturally A	AMS	Automated Manual- Selectable	7	
19.1036	27.13	22.0375		NA	Naturally A	M	Manual		7
18.5684	26.0271	21.3175		NA	Naturally A	AMS	Automated Manual- Selectable	7	
18.1649	26.1305	21.0529		NA	Naturally A	M	Manual		7
18.578	25.647	21.2085		NA	Naturally A	AMS	Automated Manual- Selectable	7	
17.5998	25.1624	20.3524		NA	Naturally A	M	Manual		7
19.7695	27.0954	22.508		NA	Naturally A	AMS	Automated Manual- Selectable	7	
18.9514	27.1289	21.9255		NA	Naturally A	M	Manual		7
19.2855	26.9563	22.1178		NA	Naturally A	AMS	Automated Manual- Selectable	7	
18.8041	26.5097	21.6338		NA	Naturally A	M	Manual		7
14.7	20.4	16.8	G	NA	Naturally A	AMS	Automated Manual- Selectable	7	
14.4	19.9	16.4	G	NA	Naturally A	AMS	Automated Manual- Selectable	7	
19.1	26.4	21.8		NA	Naturally A	AMS	Automated Manual- Selectable	7	
18.3	26.1	21.1		NA	Naturally A	M	Manual		7
18.4	25.4	21		NA	Naturally A	AMS	Automated Manual- Selectable	7	
17.9	25.5	20.7		NA	Naturally A	M	Manual		7
18.4	25.4	21		NA	Naturally A	AMS	Automated Manual- Selectable	7	
17.9	25.5	20.7		NA	Naturally A	M	Manual		7
17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automated Manual- Selectable	7	
17.1697	24.4702	19.8323		TC	Turbochar	AMS	Automated Manual- Selectable	7	
21.9	31.9	25.5		NA	Naturally A	AMS	Automated Manual- Selectable	7	
20.5	29.6	23.8		NA	Naturally A	M	Manual		6
21.5026	30.6563	24.8403		NA	Naturally A	AMS	Automated Manual- Selectable	7	
19.3636	26.4756	22.0261		NA	Naturally A	M	Manual		6
20.8	29.8	24.1		NA	Naturally A	AMS	Automated Manual- Selectable	7	
19.7	27.5	22.6		NA	Naturally A	M	Manual		6
18	23.8	20.2		NA	Naturally A	M	Manual		6
18.9	24.3	21		NA	Naturally A	SA	Semi-Automatic	8	
19.6	29	22.9471		TC	Turbochar	SA	Semi-Automatic	8	
16.2	22.7	18.6		TC	Turbochar	SA	Semi-Automatic	8	

16.9	24.5	19.6	TC	Turbochar¡SA	Semi-Automatic	8
14.1	21	16.5465	TC	Turbochar¡SA	Semi-Automatic	8
14.1	21	16.5465	TC	Turbochar¡SA	Semi-Automatic	8
21.9	31.9	25.5	NA	Naturally ÁAMS	Automated Manual- Selectable	7
20.5	29.6	23.8	NA	Naturally ÁM	Manual	6
17.7	23.4	19.9	NA	Naturally ÁM	Manual	6
21.5026	30.6563	24.8403	NA	Naturally ÁAMS	Automated Manual- Selectable	7
19.3636	26.4756	22.0261	NA	Naturally ÁM	Manual	6
20.8	29.8	24.1	NA	Naturally ÁAMS	Automated Manual- Selectable	7
19.7	27.5	22.6	NA	Naturally ÁM	Manual	6
17.3	22.9	19.4	TC	Turbochar¡AMS	Automated Manual- Selectable	7
16.8128	23.3591	19.2391	TC	Turbochar¡AMS	Automated Manual- Selectable	7
18.3	27.9	21.7	NA	Naturally ÁAMS	Automated Manual- Selectable	7
18	26.9	21.1	NA	Naturally ÁAMS	Automated Manual- Selectable	7
17.4894	26.6685	20.6947	TC	Turbochar¡AMS	Automated Manual- Selectable	7
17.2	26.5	20.4	TC	Turbochar¡AMS	Automated Manual- Selectable	7
15.5885	24.1929	18.5588	NA	Naturally ÁAMS	Automated Manual- Selectable	7
17.4894	26.6685	20.6947	TC	Turbochar¡AMS	Automated Manual- Selectable	7
15.4	24.2	18.4	TC	Turbochar¡AMS	Automated Manual- Selectable	7
15.3	23.9	18.3	TC	Turbochar¡AMS	Automated Manual- Selectable	7
15.4	24.2	18.4	TC	Turbochar¡AMS	Automated Manual- Selectable	7
15.3	23.9	18.3	TC	Turbochar¡AMS	Automated Manual- Selectable	7

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N		4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N		4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N		4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N		4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N		4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N		4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N		4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
N	N		4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	4 4-Wheel D	GPRXV04.(	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV02.7	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV02.7	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV03.4	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV03.4	10			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GPRXV03.4	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV03.4	10			GP	Gasoline (F
N	N	R	2-Wheel D	GPRXV04.(	10			GP	Gasoline (F
Y	N	A	All Wheel I	GPRXJ03.6	10			GP	Gasoline (F
Y	N	A	All Wheel I	GPRXT03.0	CDD		5	DU	Diesel, ultr
Y	N	A	All Wheel I	GPRXT03.6	10			GPR	Gasoline (F

Y	N	A	All Wheel IGPRXT03.6	10	GPR	Gasoline (F
Y	N	A	All Wheel IGPRXT04.8	10	GPR	Gasoline (F
Y	N	A	All Wheel IGPRXT04.8	10	GPR	Gasoline (F
tomated Manual with	N	R	paddles) 2-Wheel DGPRXV02.7	10	GP	Gasoline (F
N	N	R	2-Wheel DGPRXV02.7	10	GP	Gasoline (F
N	N	R	2-Wheel DGPRXV04.0	10	GP	Gasoline (F
tomated Manual with	N	R	paddles) 2-Wheel DGPRXV03.4	10	GP	Gasoline (F
N	N	R	2-Wheel DGPRXV03.4	10	GP	Gasoline (F
tomated Manual with	N	R	paddles) 2-Wheel DGPRXV03.4	10	GP	Gasoline (F
N	N	R	2-Wheel DGPRXV03.4	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXT03.6	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXT03.6	10	GP	Gasoline (F
tomated Manual with	N	R	paddles) 2-Wheel DGPRXJ03.6	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXJ03.6	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXJ03.6	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXJ03.6	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXV04.8	10	GP	Gasoline (F
tomated Manual with	N	R	paddles) 2-Wheel DGPRXJ03.6	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXV04.8	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXV04.8	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXV04.8	10	GP	Gasoline (F
tomated Manual with	N	A	paddles) All Wheel IGPRXV04.8	10	GP	Gasoline (F

Fuel Unit Name	Gas Guzzl	Gas Guzzl	2Dr Pass \	2Dr Lugg \	4Dr Pass \	4Dr Lugg \	Htchbk Pa	Htchbk Lu
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt	68	5				
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt	70	5				
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Not exempt						
Miles per gal	Unleaded Recommended)	Truck						
Miles per gal	ulfur (15 ppm maximum)	Truck						
Miles per gal	Unleaded Required)	Truck						

MPG (Unloaded Required)	miles per gT	Truck		
MPG (Unloaded Required)	miles per gT	Truck		
MPG (Unloaded Required)	miles per gT	Truck		
MPG (Unloaded Recommended)	miles per gT	Not exempt		
MPG (Unloaded Recommended)	miles per gT	Not exempt		
MPG (Unloaded Recommended)	miles per gT	Not exempt		
MPG (Unloaded Recommended)	miles per gT	Not exempt		
MPG (Unloaded Recommended)	miles per gT	Not exempt		
MPG (Unloaded Recommended)	miles per gT	Not exempt		
MPG (Unloaded Recommended)	miles per gT	Not exempt		
MPG (Unloaded Recommended)	miles per gT	Truck		
MPG (Unloaded Recommended)	miles per gT	Truck		
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16
MPG (Unloaded Recommended)	miles per gT	Not exempt	108	16

Annual Fu	EPA Calcu	Comment	City2 FE (H	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
2150	2150	911 Carrera A7							
2250	2250	911 Carrera M7							
2150	2150	911 Carrera 4 A7							
2250	2250	911 Carrera 4 M7							
2250	2250	911 Carrera 4 Cabriolet A7							
2250	2250	911 Carrera 4 Cabriolet M7							
2350	2350	911 Carrera 4 GTS A7							
2350	2350	911 Carrera 4 GTS M7							
2350	2350	911 Carrera 4 GTS Cabriolet A7							
2500	2500	911 Carrera 4 GTS Cabriolet M7							
2250	2250	911 Carrera 4S A7							
2350	2350	911 Carrera 4S M7							
2350	2350	911 Carrera 4S Cabriolet A7							
2350	2350	911 Carrera 4S Cabriolet M7							
2150	2150	911 Carrera Cabriolet A7							
2250	2250	911 Carrera Cabriolet M7							
2350	2350	911 Carrera GTS A7							
2350	2350	911 Carrera GTS M7							
2350	2350	911 Carrera GTS Cabriolet A7							
2500	2500	911 Carrera GTS Cabriolet M7							
2150	2150	911 Carrera S A7							
2250	2250	911 Carrera S M7							
2250	2250	911 Carrera S Cabriolet A7							
2250	2250	911 Carrera S Cabriolet M7							
2900	2900	911 GT3							
3100	3100	911 GT3RS							
2250	2250	911 Targa A7							
2350	2350	911 Targa M7							
2350	2350	911 Targa 4 GTS A7							
2350	2350	911 Targa 4 GTS M7							
2350	2350	911 Targa S A7							
2350	2350	911 Targa S M7							
2500	2500	911 Turbo / Turbo Cabriolet							
2500	2500	911 Turbo S / Turbo S Cabriolet							
1900	1900								
2050	2050								
2000	2000								
2250	2250								
2050	2050	Rating correction							
2150	2150								
2500	2500	Cayman GT4							
2350	2350	Cayenne V6							
2200	2200	5-Cycle FE and CREE							
2600	2600	Cayenne GTS							

2500	2500	Cayenne S
2900	2900	
2900	2900	Cayenne Turbo S
1900	1900	
2050	2050	
2500	2500	Cayman GT4
2000	2000	
2250	2250	
2050	2050	Rating correction
2150	2150	Annual Fuel Cost correction
2600	2600	Macan S
2600	2600	Carryover Macan Turbo
2250	2250	Start-Stop ON/OFF harmonic average
2350	2350	Start-Stop ON/OFF harmonic average
2350	2350	Start-Stop ON/OFF harmonic average
2500	2500	Start-Stop ON/OFF harmonic average
2600	2600	Harmonic average of Start/Stop ON and OFF.
2350	2350	Start-Stop ON/OFF harmonic average
2750	2750	Harmonic average of Start/Stop ON and OFF.
2750	2750	Harmonic average of Start/Stop ON and OFF.
2750	2750	Harmonic average of Start/Stop ON and OFF.
2750	2750	Harmonic average of Start/Stop ON and OFF.

Hwy2 Unit	Comb2 Unit	Hwy2 Unit	Comb2 Unit	Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
Alternative Fuel								

Alternative Fuel Fuel2 AltmCity CO2 I	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
				SIDI;	2	2	2	Minicompa

SIDI;	2	2	33 Standard SUV 4W
SIDI;	2	2	33 Standard SUV 4W
SIDI;	2	2	33 Standard SUV 4W
SIDI;	2	2	1 Two Seate
SIDI;	2	2	1 Two Seate
SIDI;	2	2	1 Two Seate
SIDI;	2	2	1 Two Seate
SIDI;	2	2	1 Two Seate
SIDI;	2	2	1 Two Seate
SIDI;	2	2	1 Two Seate
SIDI;	2	2	31 Small SUV 4WD
SIDI;	2	2	31 Small SUV 4WD
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars
SIDI;	2	2	6 Large Cars

Car/Truck	Calc Appr	Sales Release D	EPA FE Label	Dataset ID	Unique La	Label Rec	Relabel	Relabel D
car	Derived 5-cycle label	5/23/2015	17842		Y	N		
car	Derived 5-cycle label	5/23/2015	17843		Y	N		
car	Derived 5-cycle label	5/23/2015	17859		N	N		
car	Derived 5-cycle label	5/23/2015	17860		N	N		
car	Derived 5-cycle label	5/23/2015	17862		N	N		
car	Derived 5-cycle label	5/23/2015	17861		Y	N		
car	Derived 5-cycle label	5/23/2015	17980		N	N		
car	Derived 5-cycle label	5/23/2015	17979		Y	N		
car	Derived 5-cycle label	5/23/2015	17989		N	N		
car	Derived 5-cycle label	5/23/2015	17988		Y	N		
car	Derived 5-cycle label	5/23/2015	17864		N	N		
car	Derived 5-cycle label	5/23/2015	17901		Y	N		
car	Derived 5-cycle label	5/23/2015	17951		N	N		
car	Derived 5-cycle label	5/23/2015	17952		N	N		
car	Derived 5-cycle label	5/23/2015	17900		Y	N		
car	Derived 5-cycle label	5/23/2015	17846		Y	N		
car	Derived 5-cycle label	5/23/2015	17877		N	N		
car	Derived 5-cycle label	5/23/2015	17876		Y	N		
car	Derived 5-cycle label	5/23/2015	17962		N	N		
car	Derived 5-cycle label	5/23/2015	17961		Y	N		
car	Derived 5-cycle label	5/23/2015	17849		Y	N		
car	Derived 5-cycle label	5/23/2015	17848		Y	N		
car	Derived 5-cycle label	5/23/2015	17851		Y	N		
car	Derived 5-cycle label	5/23/2015	17850		Y	N		
car	Derived 5-cycle label	4/23/2015	17774		N	N		
car	Derived 5-cycle label	4/23/2015	17775		N	N		
car	Derived 5-cycle label	5/23/2015	17853		Y	N		
car	Derived 5-cycle label	5/23/2015	17852		Y	N		
car	Derived 5-cycle label	4/23/2015	17771		N	N		
car	Derived 5-cycle label	4/23/2015	17770		Y	N		
car	Derived 5-cycle label	4/23/2015	17768		N	N		
car	Derived 5-cycle label	4/23/2015	17769		Y	N		
car	Derived 5-cycle label	5/23/2015	17963		N	N		
car	Derived 5-cycle label	5/23/2015	17964		N	N		
car	Derived 5-cycle label	6/16/2015	18066		N	N		
car	Derived 5-cycle label	6/16/2015	18064		N	N		
car	Derived 5-cycle label	6/16/2015	18057		Y	N		
car	Derived 5-cycle label	6/16/2015	18056		Y	N		
car	Derived 5-cycle label	5/23/2015	18042		Y	N		
car	Derived 5-cycle label	5/23/2015	17990		Y	N		
car	Derived 5-cycle label	5/23/2015	17903		N	N		
D	Derived 5-cycle label	3/1/2015	17590			N		
D	Vehicle Specific 5-cycle label	8/1/2015	18416		N	N		
D	Derived 5-cycle label	3/6/2015	17591		N	N		

D	Derived 5-cycle label	3/6/2015	17592	[redacted]	N	N
D	Derived 5-cycle label	4/23/2015	17772	[redacted]		N
D	Derived 5-cycle label	4/23/2015	17773	[redacted]		N
car	Derived 5-cycle label	6/16/2015	18068	[redacted]	N	N
car	Derived 5-cycle label	6/16/2015	18067	[redacted]	N	N
car	Derived 5-cycle label	5/23/2015	17844	[redacted]	N	N
car	Derived 5-cycle label	6/2/2015	18060	[redacted]	Y	N
car	Derived 5-cycle label	6/2/2015	18061	[redacted]	Y	N
car	Derived 5-cycle label	5/23/2015	18043	[redacted]	Y	N
car	Derived 5-cycle label	5/23/2015	18044	[redacted]	Y	N
	Derived 5-cycle label	3/6/2015	17593	[redacted]	N	N
	Derived 5-cycle label	7/23/2015	18439	[redacted]	N	N
car	Derived 5-cycle label	3/20/2015	17621	[redacted]		N
car	Derived 5-cycle label	3/20/2015	17620	[redacted]		N
car	Derived 5-cycle label	3/20/2015	17685	[redacted]		N
car	Derived 5-cycle label	3/20/2015	17686	[redacted]		N
car	Derived 5-cycle label	6/16/2015	18096	[redacted]		N
car	Derived 5-cycle label	3/20/2015	17684	[redacted]		N
car	Derived 5-cycle label	6/16/2015	18097	[redacted]		N
car	Derived 5-cycle label	6/8/2015	18098	[redacted]		N
car	Derived 5-cycle label	6/8/2015	18099	[redacted]		N
car	Derived 5-cycle label	6/16/2015	18100	[redacted]		N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	911 GT3	N		Y	Porsche V\	Y	Porsche VVT	
N	N	911 GT3RS	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Base Carre	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	All GTS mo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Carrera S r	N		Y	Porsche V\	Y	Porsche VVT	
N	N	911 Turbo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	911 Turbo	N		Y	Porsche V\	Y	Porsche VVT	
N	N	2TWC, 2H(	N		Y	Porsche V\	Y	Porsche VVT System	
N	N	2TWC, 2H(	N		Y	Porsche V\	Y	Porsche VVT System	
N	N	2TWC, 2H(	N		Y	Porsche V\	Y	Porsche VVT	
N	N	2TWC, 2H(	N		Y	Porsche V\	Y	Porsche VVT	
N	N	2TWC, 2H(	N		Y	Porsche V\	Y	Porsche VVT System	
N	N	2TWC, 2H(	N		Y	Porsche V\	Y	Porsche VVT System	
N	N	Cayman G	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Cayenne 2	N		Y	Porsche V\	Y	Porsche VVT	
N	N	Engine Co(	N		N		N		
N	N	Cayenne G	N		Y	Porsche V\	Y	Porsche VVT	

N	N	Cayenne S N	Y	Porsche V\Y	Porsche VVT
N	N	Cayenne T N	Y	Porsche V\Y	Porsche VVT
N	N	Cayenne T N	Y	Porsche V\Y	Porsche VVT
N	N	2TWC, 2HC N	Y	Porsche V\Y	Porsche VVT System
N	N	2TWC, 2HC N	Y	Porsche V\Y	Porsche VVT System
N	N	Cayman G N	Y	Porsche V\Y	Porsche VVT
N	N	2TWC, 2HC N	Y	Porsche V\Y	Porsche VVT
N	N	2TWC, 2HC N	Y	Porsche V\Y	Porsche VVT
N	N	2TWC, 2HC N	Y	Porsche V\Y	Porsche VVT System
N	N	2TWC, 2HC N	Y	Porsche V\Y	Porsche VVT System
N	N	Macan S N	Y	Porsche V\Y	Porsche VVT
N	N	N	Y	Porsche V\Y	Porsche VVT
N	N	Panamera N	Y	Porsche V\Y	Porsche VVT
N	N	Panamera N	Y	Porsche V\Y	Porsche VVT
N	N	Panamera N	Y	Porsche V\Y	Porsche VVT
N	N	Panamera N	Y	Porsche V\Y	Porsche VVT
N	N	N	Y	Porsche V\Y	Porsche VVT
N	N	Panamera N	Y	Porsche V\Y	Porsche VVT
N	N	N	Y	Porsche V\Y	Porsche VVT
N	N	N	Y	Porsche V\Y	Porsche VVT
N	N	N	Y	Porsche V\Y	Porsche VVT
N	N	N	Y	Porsche V\Y	Porsche VVT

evice Desc	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C#	Drive M(	Motor Ger

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection		N		0W40

GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark IgnitN	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40
GDI	Spark Ignition Direct Injection	N	0W40

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera A7					
Y	Yes	Manual(M	Manual(M	911 Carrera M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera 4 A7					
Y	Yes	Manual(M	Manual(M	911 Carrera 4 M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera 4 Cabriolet A7					
Y	Yes	Manual(M	Manual(M	911 Carrera 4 Cabriolet M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera 4 GTS Coupe A7					
Y	Yes	Manual(M	Manual(M	911 Carrera 4 GTS M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera 4 GTS Cab A7					
Y	Yes	Manual(M	Manual(M	911 Carrera 4 GTS Cabriolet M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera 4S A7					
Y	Yes	Manual(M	Manual(M	911 Carrera 4S M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera 4S Cabriolet A7					
Y	Yes	Manual(M	Manual(M	911 Carrera 4S Cabriolet M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera Cabriolet A7					
N	No	Manual(M	Manual(M	911 Carrera Cabriolet M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera GTS A7					
Y	Yes	Manual(M	Manual(M	911 Carrera GTS M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera GTS Cab A7					
Y	Yes	Manual(M	Manual(M	911 Carrera GTS Cabriolet M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera S A7					
Y	Yes	Manual(M	Manual(M	911 Carrera S M7					
Y	Yes	Auto(AM-S	Auto(AM-S	911 Carrera S Cabriolet A7					
Y	Yes	Manual(M	Manual(M	911 Carrera S Cabriolet M7					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
Y	Yes	Auto(AM-S	Auto(AM-S	N/A					
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M6)						
N	No	Auto(AM-S	Auto(AM-S	N/A					
N	No	Manual(M	Manual(M	Boxster GTS					
Y	Yes	Auto(AM-S	Auto(AM-S	Boxster S					
Y	Yes	Manual(M	Manual(M	Boxster S					
N	No	Manual(M	Manual(M	N/A					
Y	Yes	Auto(S8)	Auto(S8)	Cayenne					
N	No	Auto(S8)	Auto(S8)	N/A					
Y	Yes	Auto(S8)	Auto(S8)	N/A					

Y	Yes	Auto(S8)	Auto(S8)	N/A
Y	Yes	Auto(S8)	Auto(S8)	N/A
Y	Yes	Auto(S8)	Auto(S8)	N/A
N	No	Auto(AM-S	Auto(AM-S	N/A
N	No	Manual(M	Manual(M6)	
N	No	Manual(M	Manual(M	N/A
N	No	Auto(AM-S	Auto(AM-S	N/A
N	No	Manual(M	Manual(M	Cayman GTS
Y	Yes	Auto(AM-S	Auto(AM-S	N/A
N	No	Manual(M	Manual(M	Cayman S
Y	Yes	Auto(AM-S	Auto(AM-S	N/A
Y	Yes	Auto(AM-S	Auto(AM-S	N/A
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera 4
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera 4S
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera 4S Executive
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera GTS
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera S
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera Turbo
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera Turbo Executive
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera Turbo S
Y	Yes	Auto(AM-S	Auto(AM-S	Panamera Turbo Executive

EPA Calculated Gas GHG Rating	[redacted]	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
30.6	5	5	GPRXV04.(	5	
29.2	5	5	GPRXV04.(	5	
30.3	5	5	GPRXV04.(	5	
29	5	5	GPRXV04.(	5	
29.6	5	5	GPRXV04.(	5	
28.3	5	5	GPRXV04.(	5	
27.9	5	5	GPRXV04.(	5	
27.3	5	5	GPRXV04.(	5	
27	5	5	GPRXV04.(	5	
26.7	4	4	GPRXV04.(	5	
28.9	5	5	GPRXV04.(	5	
28.1	5	5	GPRXV04.(	5	
28	5	5	GPRXV04.(	5	
27.6	5	5	GPRXV04.(	5	
30.9	5	5	GPRXV04.(	5	
29	5	5	GPRXV04.(	5	
28	5	5	GPRXV04.(	5	
27.6	5	5	GPRXV04.(	5	
27.9	5	5	GPRXV04.(	5	
26.7	4	4	GPRXV04.(	5	
29.7	5	5	GPRXV04.(	5	
28.8	5	5	GPRXV04.(	5	
29.1	5	5	GPRXV04.(	5	
28.4	5	5	GPRXV04.(	5	
21.8	3	3	GPRXV04.(	5	
21.4	3	3	GPRXV04.(	5	
28.8	5	5	GPRXV04.(	5	
27.8	5	5	GPRXV04.(	5	
27.6	5	5	GPRXV04.(	5	
27.1	5	5	GPRXV04.(	5	
27.6	5	5	GPRXV04.(	5	
27.1	5	5	GPRXV04.(	5	
25.9	4	4	GPRXV04.(	5	
25.9	4	4	GPRXV04.(	5	
33.9	6	6	GPRXV02.7	5	
31.4	5	5	GPRXV02.7	5	
32.9	6	6	GPRXV03.4	5	
29	5	5	GPRXV03.4	5	
31.8	5	5	GPRXV03.4	5	
29.7	5	5	GPRXV03.4	5	
26.6	4	4	GPRXV04.(	5	
	5	5	GPRXJ03.6	5	
	5	4	GPRXT03.(	5	
	4	4	GPRXT03.6	5	

	[redacted]	4	4 GPRXT03.6	5
		3	3 GPRXT04.8	5
		3	3 GPRXT04.8	5
33.9		6	6 GPRXV02.7	5
31.4		5	5 GPRXV02.7	5
26.1		4	4 GPRXV04.0	5
32.9		6	6 GPRXV03.4	5
29		5	5 GPRXV03.4	5
31.8		5	5 GPRXV03.4	5
31.8		5	5 GPRXV03.4	5
		4	4 GPRXT03.6	5
		4	4 GPRXT03.6	5
28.4		5	5 GPRXJ03.6	5
27.7		5	5 GPRXJ03.6	5
27.1		5	5 GPRXJ03.6	5
26.7		4	4 GPRXJ03.6	5
24.1		4	4 GPRXV04.8	5
27.1		5	5 GPRXJ03.6	5
24		4	4 GPRXV04.8	5
23.7		4	4 GPRXV04.8	5
24		4	4 GPRXV04.8	5
23.7		4	4 GPRXV04.8	5

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

[illegible]	$ You Save	$ You Spend	City CO2	Hwy CO2	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
		1750	437	317	383			
		2250	463	325	401			
		1750	440	322	387			
		2250	466	329	404			
		2250	449	331	396			
		2250	473	340	413			
		2750	478	347	419			
		2750	492	347	427			
		2750	495	354	431			
		3500	506	353	437			
		2250	460	336	404			
		2750	477	338	415			
		2750	473	343	414			
		2750	485	346	422			
		1750	433	315	380			
		2250	465	328	404			
		2750	479	341	417			
		2750	489	341	422			
		2750	478	347	419			
		3500	506	353	437			
		1750	449	328	395			
		2250	469	328	406			
		2250	461	330	402			
		2250	472	335	410			
		5500	606	434	529			
		6500	611	446	537			
		2250	464	337	407			
		2750	485	341	420			
		2750	477	346	418			
		2750	496	349	430			
		2750	477	346	418			
		2750	496	349	430			
		3500	518	363	448			
		3500	518	363	448			
		500	406	279	349			
		1250	434	301	374			
		1000	412	289	357			
		2250	458	334	402			
		1250	428	298	370			
		1750	453	324	395			
		3500	491	372	437			
		2750	486	365	432			
		2000	517	351	442			
		4000	548	389	476			

3500	525	363	452
5500	629	425	537
5500	629	425	537
500	406	279	349
1250	434	301	374
3500	501	378	446
1000	412	289	357
2250	458	334	402
1250	428	298	370
1750	453	324	395
4000	511	385	454
4000	529	381	462
2250	487	319	411
2750	494	331	421
2750	508	333	429
3500	517	336	436
4000	572	368	480
2750	508	333	429
4750	577	368	483
4750	583	372	488
4750	577	368	483
4750	583	372	488

346	226.6	292.3	437.4	317.4	383.4
367.8	232.4	306.9	463.2	325.2	401.1
348.5	229.9	295.1	440.4	321.8	387
370.1	235	309.3	465.9	328.7	404.2
355.9	237	302.4	449.1	331.4	396.1
376.4	243.1	316.4	473.3	339.6	413.1
380.5	248.6	321.1	478.1	347	419.1
392	248.9	327.6	491.7	347.4	426.8
394.4	254	331.2	494.6	354.3	431.4
403.8	253.3	336.1	505.6	353.3	437.1
365.2	240.8	309.2	460.1	336.5	404.5
379.8	241.8	317.7	477.3	337.8	414.5
376	245.4	317.2	472.8	342.7	414.3
385.9	247.6	323.7	484.5	345.6	422
342	225.2	289.4	432.7	315.5	380
369.6	234.6	308.8	465.3	328.1	403.6
381.1	244.5	319.6	478.9	341.5	417.1
389.4	243.8	323.9	488.6	340.5	422
380.5	248.6	321.1	478.1	347	419.1
403.8	253.3	336.1	505.6	353.3	437.1
356	234.4	301.3	449.2	327.9	394.6
372.8	234.8	310.7	469.1	328.4	405.8
366.1	236	307.6	461.1	330	402.1
375.4	239.8	314.4	472.1	335.1	410.4
488.4	313.5	409.7	605.5	434.4	528.5
493.1	322	416.1	611.1	445.8	536.7
368.9	240.9	311.3	464.4	336.6	406.9
386.4	243.9	322.3	485.1	340.7	420.1
379.6	247.7	320.2	477.1	345.8	418
396	250.4	330.5	496.4	349.4	430.2
379.6	247.7	320.2	477.1	345.8	418
396	250.4	330.5	496.4	349.4	430.2
414	260.8	345.1	517.7	363.4	448.3
414	260.8	345.1	517.7	363.4	448.3
319	198.1	264.6	405.5	279	348.6
343.5	214.2	285.3	434.5	300.7	374.3
324.5	205.6	271	412	289.1	356.7
363.4	239	307.4	458	334.1	402.2
338	212.4	281.5	428	298.2	369.6
359.2	231.2	301.6	453	323.6	394.8
391.6	267	335.5	491.2	371.8	437.5
386.9	262.2	330.8	485.7	365.3	431.5
422	248	343.7	517.3	351	442.5
439.4	279.9	367.6	547.7	389.1	476.3

420	260.4	348.2	524.8	362.9	451.9
508.7	306.4	417.7	629.5	424.8	537.4
508.7	306.4	417.7	629.5	424.8	537.4
319	198.1	264.6	405.5	279	348.6
343.5	214.2	285.3	434.5	300.7	374.3
399.5	271.8	342	500.6	378.2	445.5
324.5	205.6	271	412	289.1	356.7
363.4	239	307.4	458	334.1	402.2
338	212.4	281.5	428	298.2	369.6
359.2	231.2	301.6	453	323.6	394.8
408.3	277	349.2	511	385.2	454.4
423.3	273.5	355.9	528.7	380.5	462
387.7	227.8	315.7	486.6	319	411.2
393.9	236.6	323.1	494	330.8	420.6
405.8	238.5	330.5	508	333.4	429.4
413.7	240.4	335.7	517.3	336	435.7
460.2	264.2	372	572.2	368	480.3
405.8	238.5	330.5	508	333.4	429.4
464.1	264	374.1	576.8	367.7	482.7
469.1	267.4	378.3	582.7	372.3	488
464.1	264	374.1	576.8	367.7	482.7
469.1	267.4	378.3	582.7	372.3	488

		Comb Vol Higher	Final Labe	EPA_FUEL	EPA_GHG	EPA_AMT_
	N	4.3	4.3			
	N	4.5	4.5			
	N	4.3	4.3			
	N	4.5	4.5			
	N	4.5	4.5			
	N	4.5	4.5			
	N	4.8	4.8			
	N	4.8	4.8			
	N	4.8	4.8			
	N	5	5			
	N	4.5	4.5			
	N	4.8	4.8			
	N	4.8	4.8			
	N	4.8	4.8			
	N	4.3	4.3			
	N	4.5	4.5			
	N	4.8	4.8			
	N	4.8	4.8			
	N	4.8	4.8			
	N	5	5			
	N	4.3	4.3			
	N	4.5	4.5			
	N	4.5	4.5			
	N	4.5	4.5			
	N	5.9	5.9			
	N	6.2	6.2			
	N	4.5	4.5			
	N	4.8	4.8			
	N	4.8	4.8			
	N	4.8	4.8			
	N	4.8	4.8			
	N	4.8	4.8			
	N	5	5			
	N	5	5			
	N	3.8	3.8			
	N	4.2	4.2			
	N	4	4			
	N	4.5	4.5			
	N	4.2	4.2			
	N	4.3	4.3			
	N	5	5			
	N	4.8	4.8			
	N	4.3	4.3			
	N	5.3	5.3			

N	5	5
N	5.9	5.9
N	5.9	5.9
N	3.8	3.8
N	4.2	4.2
N	5	5
N	4	4
N	4.5	4.5
N	4.2	4.2
N	4.3	4.3
N	5.3	5.3
N	5.3	5.3
N	4.5	4.5
N	4.8	4.8
N	4.8	4.8
N	5	5
N	5.3	5.3
N	4.8	4.8
N	5.6	5.6
N	5.6	5.6
N	5.6	5.6
N	5.6	5.6

EPA_UNRD

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	EPA_UNRI	EPA_UNRI	EPA_ADJ_	EPA_PHEV	Label Subr	GHG 1-10 rating on Ethanol (EPA Deter
													Mr Ross	Gatzke
													Mr Ross	Gatzke
													Mr Ross	Gatzke

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Ex. 7

Ex. 7

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From: Redmann, Stephan
Sent: Fri 8/21/2015 3:40:57 PM
Subject: WLTP IWG No. 12 - Reminder participation feedback
WLTP-12-01e - Invitation .pdf

Dear IWG members,

This is a kind reminder to give a **feedback until end of August**, if you would like to attend the 12th meeting of WLTP IWG in Tokyo, JAPAN, from September 29th to October 1st 2015.

The following experts already confirmed their participation:

REDMANN, KOBAYASHI, ICHIKAWA, KOLESA, DUBUC

ASTORGA-LLORENS, BERGMANN, BHAT, COLEMAN, EBERHARDT, GREENING, HARTUNG, HILL, HÜLSWITT, KÖHLER, MAROTTA, NÄGELI, NAKHAWA, NIIKUNI, ÖHLUND, RIEMERSMA, RIJNDERS, ROHDE, STEININGER, STEVEN, SUDO,

VALLAUDE, VARTHOLOMAIOS, WALAWSKI, WEIDMANN

Best regards

Stephan Redmann

(Chair of WLTP IWG)

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Division LA27

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WLTP-12-01e

INVITATION TO THE 12th SESSION OF THE GRPE IWG ON WORLDWIDE HARMONIZED LIGHT VEHICLES TEST PROCEDURES (WLTP)

You are kindly invited to the 12th WLTP IWG session, which will take place in **Tokyo, JAPAN**:

Dates: **September 29th – October 1st 2015**
(Tuesday – Thursday)

Times: 09:30 – 18:00

Place: **JASIC Office**
7th floor, Zennihon Truck Sogo Kaikan.,
3-2-5 Yotsuya, Shinjuku-ku, Tokyo 160-0004KANSEN

For further information on JASIC location, Tokyo Metro, Suica Pasmo Routes and hotel recommendations please check the annex documents to this invitation.

If you intend to participate, please inform **latest by end of August**:

The Chair, Stephan Redmann (Email: stephan.redmann@bmvi.bund.de), Technical Secretary, Nick Ichikawa (Email: noriyuki_ichikawa@mail.toyota.co.jp) & Meeting Host, Yuki Toba (Email: toba@jasic.org).

Remote participation may be offered; please send a request to the above mentioned responsible persons in order to check for practical arrangements.

In case you need to apply for a VISA (e.g. Indian and Chinese colleagues) and you need assistance, please contact Yuki Toba from JASIC.

Agenda and meeting documents will be uploaded to the UN webpage prior to the meeting as soon as they become available:
https://www2.unece.org/wiki/display/trans/WLTP+12th+session

VW FOIA, EPA 06/20/2017 2017-FFP_022154

Please note that two **WLTP IWG Subgroup meetings** will be held in conjunction with WLTP IWG:

- Subgroup EV: Monday, **September 28th**, 10:00 – 18:00
- Subgroup Drafting: Friday, **October 2nd** , 9:30 – 18:00

An invitation will be provided separately by the SG Chairs (EV: Niikuni/Ohlund, Drafting: Dubuc) to their members.

Kind regards
Stephan Redmann
(Chair of WLTP IWG)

Annexes (separate documents):
- JASIC location
- Tokyo Metro map
- Suica Pasmo Routes map
- Hotel recommendations

VW FOIA, EPA 06/20/2017 2017-FFP_022155

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From: Paul W Gruber
Sent: Fri 8/21/2015 8:10:19 PM
Subject: STEPS board meeting takeaways & engagement to-dos
STEPS 2015 Projects (as of 18Aug2015).docx

Dear STEPS advisory board members, representatives and team,

Thank you to STEPS members who attended our board meeting on Tuesday at Asilomar. We had a productive conversation with research leaders and heard insightful feedback from sponsors.

Click to access presentations (password: **Non-Responsive**

My Key Takeaways:

1. Board members have more access than ever to our program's development, research insights and team members -- through our symposia and workshops, research insight emails, draft white papers, quarterly reports, webinars, STEPS public website, sponsors-only website (password: STEPS2015), and our publications database. Many of these research communications, and other accomplishments, are listed in our overview presentation.

2. Sponsors are highly interested in engaging *earlier* in our projects -- which is excellent -- to help advise on key research questions and methods and provide data and expertise. We will improve upon our process to achieve this, of course without losing the independent value of our research. Activities could include more conference calls and webinars with STEPS consortium members, to discuss project areas and research needs early, and throughout, the research process. To begin fostering this closer engagement, see **Your Engagement Tasks** section below.

3. Sponsors are reminded that access to our STEPS research insights and team is just a phone call or email away. To set up a conversation on a particular research topic or organize a visit, please reach out.

4. Sponsors expressed interest in having another intimate advisory board meeting at the December 10-11 symposium, like we did in December 2014. We will organize such a ~2 hour meeting on Dec. 10 or 11.

Your Engagement Tasks:

Since many board members expressed interest in engaging more with the STEPS team, earlier in the research process, we ask that each board member collect feedback from colleagues and respond to the following:

1. Review the attached STEPS 2015 Projects and respond to me with the **top 5 projects** you would like to follow and/or become engaged in more closely. You may also note other projects in which you have high interest. Your responses will be kept confidential and will only be reported in aggregate, without attribution, to the consortium group.

2. What projects or research areas, not included on this 2015 list, do you feel we should consider for 2016? Keep in mind that projects should fall within one or more of the 4 research themes we have established for 2015.

3. What data and/or expertise can you share to bolster the value of particular STEPS projects or research areas?

4. Several of you indicated that you can help us reach out to potential sponsors working in MD/HD technologies and fleets, enhancing our research in these areas. Please provide names of key contacts you feel would be interested in learning about STEPS.

If you have other thoughts on ways to engage with us, please let me know.

Save the Dates

STEPS Fall Symposium:

•□□□□□□□□ December 10-11, 2015 at UC Davis

Thank you for your participation and contributions as a STEPS consortium member.

Best regards,

Paul

PS: Please note that I am taking my annual vacation from Aug. 22 to Sept. 7. If you have an urgent request, please contact Beth Bourne, bybourne@ucdavis.edu, or Lew Fulton, lmfulton@ucdavis.edu. Thank you.

Paul W. Gruber

Executive Director

NextSTEPS (Sustainable Transportation Energy Pathways)

Institute of Transportation Studies

University of California, Davis

www.steps.ucdavis.edu

office: (530) 752-1934

mobile: (703) 772-4053

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 8/21/2015 8:13:54 PM
Subject: DAILY: GM, Ford use 'veiled threat' of imports for UAW leverage | '16 Toyota Prius uncovered | Mercedes to hang 3-pointed star on another NFL stadium? | Apple lands Tesla engineer | VW delays Phaeton

Today's most read story

Toyota's redesigned 2016 Prius hybrid exposed during photo shoot

August 21, 2015

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GM, Ford use 'veiled threat' of imports to gain leverage with UAW

GM and Ford are contemplating building cars with lower-paid workers in Mexico and China, a strategy that would improve their hand in contract talks as the UAW seeks higher pay. The automakers and union are in their final weeks of talks to replace four-year contracts that end Sept. 14.

Tesla engineer joins Apple's growing team of automated car experts

Apple has hired a senior engineer from Tesla, according to a LinkedIn posting, as part of Apple's effort to build a team of experts in automated driving.

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UAW calls potential China-made Buick 'alarming'
AutoNation adds 16 stores, makes biggest purchase since 2001
Has the Taurus

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comeback story come to an end?

Honda's factory fix: Robots

Updated Tacoma gets timing right

"I had Dealertrack, ADP, and Reynolds in my stores. I recently switched all 7 to Reynolds."

"Many people base this type of decision on price, but I decided not to. I did my own needs analysis focused on the product and the retail process and Reynolds and Reynolds blew the competition away."

- Joe Lanam, President of Premier Companies

See why dealers switch to Reynolds

Mercedes to lease Carolina Panthers' stadium to Atlanta Falcons, report says

Daimler's Benz says different type of coupling with Apple and Google for NFL's autonomous cars, makers of next-generation autos cannot be built without greater input from telecoms and software experts.

Toyota may buy replacement airbag inflators from three Takata rivals

2008 Honda Accords probed by NHTSA for airbags that may fail to deploy

Jeep to serve as popemobile when pontiff visits U.S.

2016 Honda Pilot nabs Top Safety Pick+ rating

GM recalls Impalas for airbags flaw involving infant seats

VW delays revamp of Phaeton flagship in profit push, report says

Tesla to install charging stations at 30 high-end Airbnb properties

BLOG: **YANG JIAN**

Why the Chinese market rout is hitting global auto brands

Photo Galleries

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>> GALLERY

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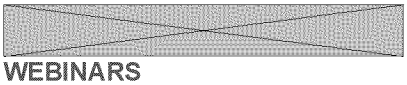

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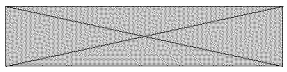
EVENTS

» Sept. 22 - NY Marketing Seminar
» Oct. 1 - Automobilwoche Kongress
» Oct. 14 - Best Dealerships To Work For

» Sept. 1 at 2pm ET - Used Inventory Financing
by NextGear Capital
» Sept. 10 at 2pm ET - Buyer Detection
by Outsell
» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM



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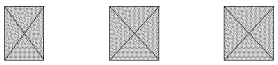

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From: Automotive News
Sent: Fri 8/21/2015 8:14:19 PM
Subject: DAILY: GM, Ford use 'veiled threat' of imports for UAW leverage | '16 Toyota Prius uncovered | Mercedes to hang 3-pointed star on another NFL stadium? | Apple lands Tesla engineer | VW delays Phaeton

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See why they switched

Mercedes to sacrifice interior space for Apple, Google, report Atlanta Falcons, report says

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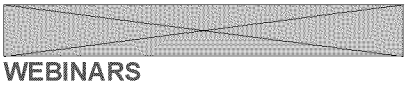

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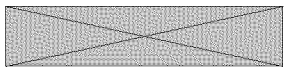

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From: Green Car Reports
Sent: Sun 8/23/2015 4:03:53 PM
Subject: Green Car Report Daily Headlines

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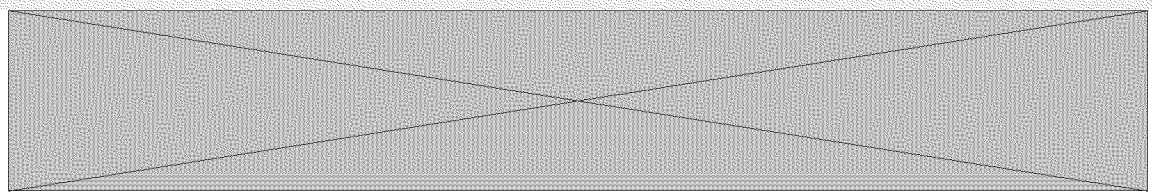

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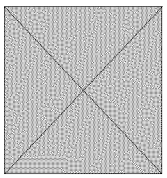
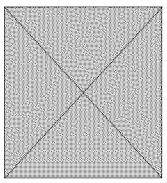
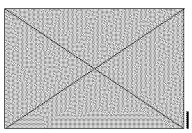




The latest from your friends at GCR:

Volkswagen e-Golf Climate Control: How Much Does A/C Impact Range?

Aug 23, 2015 12:00 pm | feedback@highgearmedia.com (Bengt Halvorson)



In Portland, Oregon, where we're putting our long-term Volkswagen e-Golf to the test, it's been one of the hottest summers on record. So far in the summer of 2015, Portland has had more than 25 days reaching 90 degrees or more, as well as multiple 100-degree days—in all, some serious heatwaves. Yet we've been keeping our...

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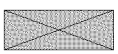

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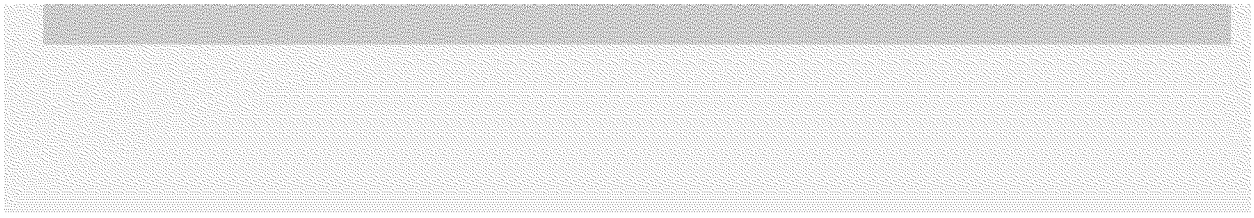


To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
From: Brooks, Phillip
Sent: Mon 8/24/2015 2:25:06 AM
Subject: Re: Summary of discussion with Ex. 7 VW 8/21/2015

10:00am would work for me.

Sent from my iPhone

On Aug 23, 2015, at 10:06 PM, Bunker, Byron <bunker.byron@epa.gov> wrote:

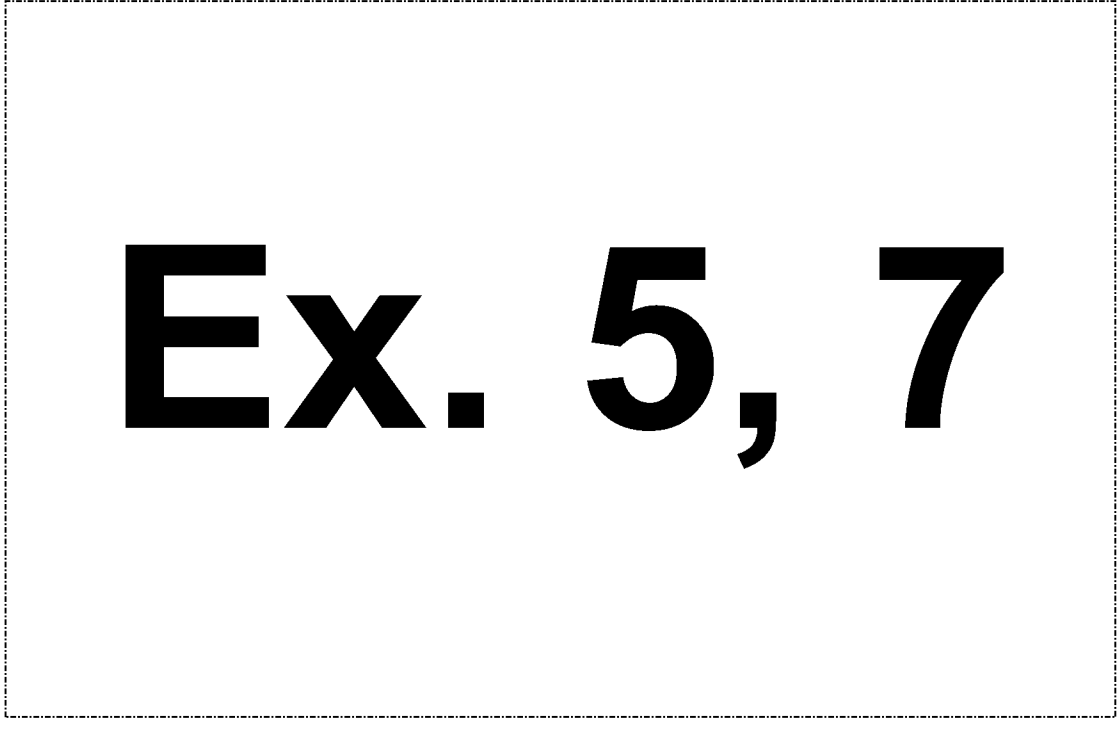
> Phil,
>
> Can you do a call with Chris and our team sometime tomorrow morning or late afternoon? We would like to make sure we are getting going the right way on this VW issue.
>
> Let me know if you have a free hour and we should be able to make a call work.
>
> Thanks,
>
> Byron
>
> Byron Bunker
> US EPA
> NVFEL Office Phone (734) 214-4155
> DC Office Phone (202) 343-9283
> Cell Phone (734) 353-9623
>
> Sent from my cell phone.
>
> On Aug 21, 2015, at 5:12 PM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:
>
> **Ex. 5, 7**
>
> Sent from my iPhone
>
> On Aug 21, 2015, at 4:19 PM, Bunker, Byron <bunker.byron@epa.gov> wrote:

Hi Phil,

In lieu of our call this afternoon, I am sending you this summary of the issued based on a call Linc and I had with Ex. 7 of VW of America this morning and our ongoing coordination with the CARB team.

In 2014, West Virginia University's (WVU's) Center for Alternative Fuels, Engines and Emissions published a report entitled In-Use Emissions Testing of Light-Duty Diesel Vehicles in the United States. The report can be found here -- http://www.theicct.org/sites/default/files/publications/WVU_LDDV_in-use_ICCT_Report_Final_may2014.pdf

That report showed high in-use NOx emissions (in some cases more than 10x higher) from Volkswagen's light-duty diesel products including an SCR equipped diesel. Interestingly the report had been commissioned by an NGO that was wanting to show that US certified diesels achieve good in-use performance and therefore European diesels could achieve the same good performance if the European authorities adopted similar compliance programs as the US. The very poor performance of the vehicles was a significant surprise.



Ex. 5, 7

Ex. 5, 7

We will schedule some time to talk about this soon.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Bunker, Byron
Sent: Mon 8/24/2015 9:57:47 AM
Subject: VW call, can 10 AM work for you?

Phil and I can do 10AM this morning if that can work for you.

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Cell Phone (734) 353-9623

Sent from my cell phone.

From: Bunker, Byron
Required Attendees: Bunker, Byron; Grundler, Christopher; Brooks, Phillip; Belser, Evan; Cook, Leila; Wehrly, Linc; Manners, Mary
Optional Attendees: Stewart, Gwen; Hengst, Benjamin; Werner, Jacqueline
Location: Conf Call Non-Responsive Code Non-Responsive
Importance: Normal
Subject: Conference Call - VW Diesel Update and Next Steps
Start Date/Time: Mon 8/24/2015 2:00:00 PM
End Date/Time: Mon 8/24/2015 3:00:00 PM

I still need to confirm that 10 will work for Chris's calendar. Presuming it will, we will get together this morning to discuss the VW diesel issue and next steps.

Agenda:

Report out on what we know

- Ex. 5, 7
-
-

Create list of what we still need to know

- Ex. 5, 7
-
-
-
- Ex. 5, 7
-
-

Initial Plan / Next Steps to answer what we need to know

- Ex. 5, 7
-
-

From: Bunker, Byron
Required Attendees: Grundler, Christopher; Brooks, Phillip; Belser, Evan; Cook, Leila; Wehrly, Linc; Manners, Mary
Optional Attendees: Stewart, Gwen; Hengst, Benjamin
Location: Conf Call 866 299-3188 **Non-Responsive**
Importance: Normal
Subject: Conference Call - VW Diesel Update and Next Steps
Start Date/Time: Mon 8/24/2015 2:00:00 PM
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Initial Plan / Next Steps to answer what we need to know

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To: Caldwell, Amy[caldwell.amy@epa.gov]; Wasenko, Barbara[Wasenko.Barbara@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Betty Stendel[stendel.betty@epa.gov]; Kolowich, Bruce[kolowich.bruce@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Mylan, Christopher[Mylan.Christopher@epa.gov]; Haugen, David[haugen.david@epa.gov]; Miller, Debra L.[Miller.DebraL@epa.gov]; Watkins, Erica[Watkins.Erica@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Galano, Fidel[Galano.Fidel@epa.gov]; Johnson, Francene[Johnson.Francene@epa.gov]; Stewart, Gwen[Stewart.Gwen@epa.gov]; Jones, Jacqueline[Jones.Jacqueline@epa.gov]; Blubaugh, Jim[Blubaugh.Jim@epa.gov]; Weihrauch, John[Weihrauch.John@epa.gov]; Iffland, JoNell[Iffland.JoNell@epa.gov]; Berrier, Judi[Berrier.Judi@epa.gov]; Greuel, Justin[Greuel.Justin@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Sargeant, Kathryn[sargeant.kathryn@epa.gov]; Vawters, Katie[Vawters.Katie@epa.gov]; Derksen, Kimberly[derksen.kimberly@epa.gov]; Cook, Leila[cook.leila@epa.gov]; McQueen, Lyndia[mcqueen.lyndia@epa.gov]; Le, Madison[Le.Madison@epa.gov]; Peralta, Maria[Peralta.Maria@epa.gov]; Brusstar, Matt[brusstar.matt@epa.gov]; Horowitz, Michael[horowitz.michael@epa.gov]; Sabourin, Michael[sabourin.michael@epa.gov]; Haley, Mike[Haley.Mike@epa.gov]; Cooper, Nanette[cooper.nanette@epa.gov]; Paff, Patricia[paff.patricia@epa.gov]; Shaffer, Patricia[Shaffer.Patricia@epa.gov]; Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]; Curtis, Rhonda[Curtis.Rhonda@epa.gov]; Larson, Robert[larson.robert@epa.gov]; Waite, Sherry[waite.sherry@epa.gov]; Patterson, Susan[Patterson.Susan@epa.gov]; Nelson, Suzanne[nelson.suzanne@epa.gov]; Meekins, Tanya[Meekins.Tanya@epa.gov]; Moore, Theresa[Moore.Theresa@epa.gov]; Bradish, Tracey[bradish.tracey@epa.gov]
Cc: Atkinson, Emily[Atkinson.Emily@epa.gov]; Browne, Cynthia[Browne.Cynthia@epa.gov]; Gonzalez, Gail[Gonzalez.Gail@epa.gov]; White, SharonB[White.SharonB@epa.gov]
From: Stewart, Gwen
Sent: Mon 8/24/2015 12:27:30 PM
Subject: CHRISTOHER GRUNDLER CALENDAR

CHRISTOPHER GRUNDLER

CALENDAR

MONDAY, AUGUST 24, 2015

CHRISTOPHER GRUNDLER WILL BE

OUT OF THE OFFICE

ON ANNUAL LEAVE FROM

MONDAY, AUGUST 24, 2015

AND RETURING ON

TUESDAY, SEPTEMBER 8, 2015

10:00 AM – 11:00 AM Conference Call: VW Diesel Update and Next Steps

By Telephone: 866 299-3188

Access Code: Ex. 6

Ex. 6

Chris will be participating.

LEILA COOK WILL BE ACTING OFFICE DIRECTOR

FROM

MONDAY, AUGUST 24, 2015 THROUGH

FRIDAY, AUGUST 28, 2015

734 214-4820

BENJAMIN HENGST WILL BE ACTING OFFICE DIRECTOR

FROM

MONDAY, AUGUST 31, 2015 THROUGH

FRIDAY, SEPTEMBER 4, 2015

202 564-1495

Gwen Stewart

Office of Transportation and Air Quality

202 564-1682 – Telephone

202 564-1686 – Fax Number

Stewart.gwen@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/24/2015 12:29:54 PM
Subject: A.M. NEWSCAST: Toyota to ban below-invoice ads - dealers | Study: VW, Infiniti dealers among unhappiest | United against hackers | Subaru product peek | F-150 Raptor test

August 24, 2015

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From: Automotive News
Sent: Mon 8/24/2015 12:30:23 PM
Subject: A.M. NEWSCAST: Toyota to ban below-invoice ads - dealers | Study: VW, Infiniti dealers among unhappiest | United against hackers | Subaru product peek | F-150 Raptor test

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To: Janet Cohen[Cohen.Janet@epa.gov]; Manners, Mary[manners.mary@epa.gov]
From: Wehrly, Linc
Sent: Mon 8/24/2015 12:51:41 PM
Subject: FW: Conference Call - VW Diesel Update and Next Steps
VW Diesel Summary 24 August 2015.docx

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Bunker, Byron
Sent: Monday, August 24, 2015 8:51 AM
To: Grundler, Christopher; Brooks, Phillip; Belser, Evan; Cook, Leila; Wehrly, Linc; Manners, Mary
Cc: Hengst, Benjamin
Subject: Conference Call - VW Diesel Update and Next Steps

Attached is a one-pager that summarizes most of what we know right now. I would like to use this at 10 to check for any inconsistencies (does anyone understand something differently) and then to help us identify our next steps.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

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Location: Conf Call 866 299-3188 Non-Responsive
Importance: Normal
Subject: FW: Conference Call - VW Diesel Update and Next Steps
Start Date/Time: Mon 8/24/2015 2:00:00 PM
End Date/Time: Mon 8/24/2015 3:00:00 PM

-----Original Appointment-----
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To: Bunker, Byron; Grundler, Christopher; Brooks, Phillip; Belser, Evan; Cook, Leila; Wehrly, Linc; Manners, Mary
Cc: Stewart, Gwen; Hengst, Benjamin
Subject: Conference Call - VW Diesel Update and Next Steps
When: Monday, August 24, 2015 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: Conf Call 866 299-3188 Non-Responsive

I still need to confirm that 10 will work for Chris's calendar. Presuming it will, we will get together this morning to discuss the VW diesel issue and next steps.

Agenda:

Report out on what we know

Ex. 5, 7

Create list of what we still need to know

Ex. 5, 7

Initial Plan / Next Steps to answer what we need to know

- [redacted]
- Ex. 5, 7
- [redacted]

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Manners, Mary[manners.mary@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Bunker, Byron
Sent: Mon 8/24/2015 2:05:15 PM
Subject: RE: Conference Call - VW Diesel Update and Next Steps

866 299-3188

Non-Responsive

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Brooks, Phillip
Sent: Monday, August 24, 2015 10:04 AM
To: Bunker, Byron
Cc: Grundler, Christopher; Belser, Evan; Cook, Leila; Wehrly, Linc; Manners, Mary; Hengst, Benjamin
Subject: Re: Conference Call - VW Diesel Update and Next Steps

Although I saw the scheduler post on my phone, when I go to the calendar I can't find it so I don't have the number, can you send that to me?

Sent from my iPhone

On Aug 24, 2015, at 8:51 AM, Bunker, Byron <bunker.byron@epa.gov> wrote:

> Attached is a one-pager that summarizes most of what we know right now. I would like to use this at 10 to check for any inconsistencies (does anyone understand something differently) and then to help us identify our next steps.
>
> Thanks,
>
> Byron
>
> **********
>
> Byron Bunker
>
> Director Compliance Division
>
> Office of Transportation and Air Quality
>
> Environmental Protection Agency
>
> 2000 Traverwood Drive
>
> Ann Arbor, MI 48105
>
> Bunker.Byron@epa.gov
>
> Phone: (734) 214-4155
>
> Mobile: (734) 353-9623
>
> **********
>
> <VW Diesel Summary 24 August 2015.docx>

Non-Responsive

Non-Responsive

Non-Responsive

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Non-Responsive

From: Peavyhouse, Robert [mailto:Peavyhouse.Robert@epa.gov]
Sent: Wednesday, July 16, 2014 6:16 PM
To: Toussagnon, Kareen (059)
Cc: French, Roberts
Subject: RE: Fw: WG:5-Cycle Calculator

There is a button on the GUI that says "Delete Data". It allows you to specify which rows to delete.

The log is not intended to allow you to upload data to it. It is only intended to be a log of the calculations already performed by the calculator.

If someone questions one of the calculations, it allows them to send me the input parameters they used.

It's only real purpose is to allow you to go back and see a calculation you have already performed in the case where you may have typed a number incorrectly, selected the wrong type of calculation, etc.

It also allows you update a single test and recalculate the results without having to re-enter all of the other tests.

I added it to the calculator at the request of VW, but it has proven to be a lot more work than I originally thought, and I haven't got any feedback that anyone is even using it.

As far as the PHEV tool, Rob French is finishing a tool right now. I don't think it is completely done, because he is currently working on the rounding methodology for the tool.

If you contact him, he might be able to give you a version that you can use.

Robert Peavyhouse
Compliance Division
U.S. EPA - OTAQ
Phone: (734) 214-4814

From: kareen.toussagnon@daimler.com [mailto:kareen.toussagnon@daimler.com]
Sent: Wednesday, July 16, 2014 3:31 AM
To: Peavyhouse, Robert
Subject: RE: Fw: WG:5-Cycle Calculator

Dear Robert,

Hope all is well. This is just a follow-up to my email from back in February. I just have a few (quick) questions,

- Any news on an EPA PHEV tool?

- How can I clear (old data) and upload (new data) to the 5-Cycle Cal log? The file is currently protected and the data can only be manually entered via the interface.

The possibility of an automated upload will help minimize potential errors

Any feedback would be greatly appreciated. Thank you very much and have a nice day.

Non-Responsive

Mit freundlichen Grüssen / With best regards/ Salutations cordiales
E. Kareen Toussagnon
Emission and Fuel Economy Certification USA/Canada
Mercedes-Benz Cars Development
059/H105-RD/FZE
DAIMLER AG - 71032 Böblingen/Germany
Tel.: +49 - (0)7031 - 90 - 82964
e-Fax: +49 - (0) 711 - 30 - 52182964
Mobil: +49-151-58625270
kareen.toussagnon@daimler.com

Daimler AG
Sitz und Registergericht/Domicile and Court of Registry: Stuttgart
HRB-Nr./Commercial Register No. 19360
Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Manfred Bischoff
Vorstand/Board of Management: Dieter Zetsche (Vorsitzender/Chairman), Wolfgang Bernhard, Christine Hohmann-Dennhardt, Wilfried Porth, Andreas Renschler, Hubertus Troska, Bodo Uebber, Thomas Weber

Non-Responsive

Non-Responsive

Non-Responsive

From: Wehrly, Linc
Required Attendees: Joel Ball; Snyder, Jim; Dalton, Joel; wright.davida@epa.gov; Ott, William; Bill Pidgeon; Sohacki, Lynn
Location: C34
Importance: Normal
Subject: VW Off-Cycle Emissions
Start Date/Time: Tue 8/25/2015 2:00:00 PM
End Date/Time: Tue 8/25/2015 3:00:00 PM

From: Wehrly, Linc
Required Attendees: Joel Ball; Snyder, Jim; Dalton, Joel; wright.davida@epa.gov; Ott, William; Bill Pidgeon; Sohacki, Lynn
Location: C34
Importance: Normal
Subject: VW Off-Cycle Emissions
Start Date/Time: Tue 8/25/2015 2:00:00 PM
End Date/Time: Tue 8/25/2015 3:00:00 PM

To: Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7 (EEO)
Sent: Mon 8/24/2015 3:38:33 PM
Subject: FW: Ex. 4 - CBI
Ex. 4 - CBI

Ex. 4 - CBI

Hello Byron and Linc,

Here are the slides we used for the meeting with CARB last week. Ex. 4 - CBI

Ex. 4 - CBI

If you would like me to come in and explain further I am willing to do that.

Let me know what you would like to do,

Ex. 7

Ex. 5

Ex. 5

Ex. 5

Ex. 5

Ex. 5

From: Valentine, Julia
Sent: Thursday, August 13, 2015 1:50 PM
To: Birgfeld, Erin
Cc: Millett, John
Subject: RE: (OTAQ) DDL; (requested); The Truth About Cars; re: Audi

ONE LAST UPDATE:

Reporter said this is what the story is about (I thought it was something Christie and the reporter had already worked on.)

From reporter:

The story is about the 2016 Audi A3 TDI. A person said that they ordered a car, was promised delivery and discovered that the car is waiting at port on a "quality hold."

We reached out to Audi, and they said that the car couldn't be sold in America without an EPA rating, and that the MY16 A3 TDIs were awaiting a rating — it's not a quality issue.

I was just wondering:

1) Is that true?
2) The 2016 A3 TDI is identical to the 2015 A3 TDI. Is it common for the EPA to rate cars year-over-year that haven't changed?
3) Is there an estimated date for the rating?
4) Is it common for cars to sit at port waiting for a rating?

I'm really just fact-checking what spokespeople from Audi claimed is all.

Julia P. Valentine

Office of Public Affairs

U.S. EPA

202.564.2663 direct

202.740.1336 m/txt

From: Valentine, Julia
Sent: Thursday, August 13, 2015 1:30 PM
To: Birgfeld, Erin
Cc: Millett, John
Subject: RE: (OTAQ) DDL; (requested); The Truth About Cars; re: Audi

UPDATE:

DEADLINE: CoB today 8/13

More from reporter:

I'm looking to put a story together today, so my deadline is probably a few hours from now.

If it helps at all, I'm just looking to fact-check those things. I'm really not looking for a quote from the EPA, so if that makes things easier, that would be awesome. Everything can be on background. I'm just trying to get a few basics in order for our story.

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To: Birgfeld, Erin
Cc: Millett, John
Subject: (OTAQ) DDL; (requested); The Truth About Cars; re: Audi

Aaron Cole
News Editor
The Truth About Cars

303-902-2957

aaron.m.cole@me.com

Reporter request:
I just wanted to double-check a couple things with you.

Audi of America is saying it can't deliver its 2016 A3 TDI models to consumers without an EPA rating.

1) Is that true?
2) The 2016 A3 TDI is identical to the 2015 A3 TDI. Is it common for the EPA to rate cars year-over-year that haven't changed?
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Julia P. Valentine

Office of Public Affairs

U.S. EPA

202.564.2663 direct

202.740.1336 m/txt

To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7 (EEO)
Sent: Mon 8/24/2015 4:45:35 PM
Subject: RE: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

Hello Byron,

My schedule is pretty open this week so let me know. Next week will work as well.

Talk to you soon,

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Monday, August 24, 2015 12:43 PM
To: Ex. 7 (EEO)
Cc: Wehrly, Linc
Subject: Re: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

Thanks Ex. 7 Ex. 6 I am going to need to come into the office some but I don't know yet when. Linc or I will follow up later if it makes sense to get together this week. I might prefer to wait until next week.

Thanks,

Byron

Byron Bunker

US EPA

NVFEL Office Phone (734) 214-4155

DC Office Phone (202) 343-9283

Cell Phone (734) 353-9623

Sent from my cell phone.

On Aug 24, 2015, at 11:38 AM, Ex. 7 @vw.com> wrote:

Hello Byron and Linc,

Ex. 4 - CBI

If you would like me to come in and explain further I am willing to do that.

Let me know what you would like to do,

Ex. 7

Ex. 4 - CBI

Ex. 5

Ex. 5

Ex. 5

Ex. 5

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From: Valentine, Julia
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Cc: Millett, John
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Julia P. Valentine

Office of Public Affairs

U.S. EPA

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Subject: RE: (OTAQ) DDL; (requested); The Truth About Cars; re: Audi

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DEADLINE: CoB today 8/13

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Julia P. Valentine

Office of Public Affairs

U.S. EPA

202.564.2663 direct

202.740.1336 m/txt

From: Valentine, Julia
Sent: Thursday, August 13, 2015 1:24 PM
To: Birgfeld, Erin
Cc: Millett, John
Subject: (OTAQ) DDL; (requested); The Truth About Cars; re: Audi

Aaron Cole

News Editor
The Truth About Cars
303-902-2957

aaron.m.cole@me.com

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4) Apparently, some of the cars are at port waiting for the rating to be delivered. Is that common?

Julia P. Valentine

Office of Public Affairs

U.S. EPA

202.564.2663 direct

202.740.1336 m/txt

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 8/24/2015 8:26:29 PM
Subject: Argentine family on road trip to see pope in Philadelphia
MAIL_CONVERSATION_TOPIC: Argentine family on road trip to see pope in Philadelphia
Created: Fri 3/18/2016 6:18:27 PM

They packed their bags and embarked on a months-long adventure through the Americas in a Volkswagen van they dubbed Francisca.The final destination? Philadelphia, so they can see...

View article...

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 8/24/2015 10:26:57 PM
Subject: Argentine family on road trip to see pope in Philadelphia
MAIL_CONVERSATION_TOPIC: Argentine family on road trip to see pope in Philadelphia
Created: Fri 3/18/2016 6:18:27 PM

They packed their bags and embarked on a months-long adventure through the Americas in a Volkswagen van they dubbed Francisca.The final destination? Philadelphia, so they can see...

View article...

From: Brooks, Phillip
Importance: Normal
Subject: VW
Start Date/Time: Mon 8/31/2015 6:00:00 PM
End Date/Time: Mon 8/31/2015 7:00:00 PM

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE Member Connection
Sent: Tue 8/25/2015 9:47:39 AM
Subject: Open Forum Digest for Monday August 24, 2015

[redacted]

Open Forum

Post New Message Online Post New Message via Email

Aug 24, 2015

started 13 hours ago, Robert Riley (0 replies)

Verification of current recall programs

1As a 50 year member of SAE, I have recently... Robert Riley

started 20 hours ago, Jerry Alcone (0 replies)

Help! my 2002 S10 eats Right Rear turn signal bulbs

2 Over 150K mile life to date the right rear turn... Jerry Alcone
started 21 hours ago, Jerry Alcone (0 replies)

Your favorite story about non-technical types over ruling engineering decisions for cost or schedule reasons.

3 Message Jerry Alcone
started one month ago, Robert Rowells (27 replies)

Autonomous vehicles, would we want them?

4 Has it dawned on anyone else that we have, over... Robert Riley
started 2 months ago, Jerry Alcone (50 replies)

Electronic Content in Modern Cars

5 EDR = Event Data Recorder These devices can... Robert Gruszczynski

6 So do I have a delete option on my order

form? ... Jerry Alcone

top next

1. Verification of current recall programs

Reply All Online | Reply All Email

-

Robert Riley

Email Sender View Thread Recommend Forward Flag as Inappropriate

2. Help to my 2002 S10 eats Right Rear turn signal bulbs

Aug 24, 2015 8:12 AM

Jerry Alcone

Over 150K mile life to date the right rear turn signal bulb has burned out 5 times, Left rear is original, any ideas beyond keeping a spare+phillips screw driver in glove box I signal for left turns way more than for right turns. It also eats ventilation blower speed controllers, resisters for speeds 1 and 2 burn out in 10~20K miles. I have a suspicion that this is blower wheel rubbing on it's enclosure. Typical Pain In Ass, PIA to change.

Jerry Alcone
Retired
Albuquerque NM

Email Sender View Thread Recommend Forward Flag as Inappropriate

top previous next

3. Your favorite story about non-technical types over ruling engineering decisions for cost or schedule reasons.

Reply All Online | Reply All Email

Jerry Alcone

Jerry Alcone
Retired
Albuquerque NM

Email Sender View Thread Recommend Forward Flag as Inappropriate

top previous next

4. Re: Autonomous vehicles, would we want them?

Reply All Reply All

Aug 24, 2015 3:36 PM

Robert Riley

Has it dawned on anyone else that we have, over 50 years, spent billions on NHTSA and its questionable hardware in an attempt to ***ameliorate*** crashes. Why hadn't we been developing systems to ***eliminate*** crashes? A hint could have been gleaned in the '70s when the miniturization of circuits was reaching fruition and attention was being paid to accompanying sensors.

Suggest that we freeze regulation and strive for self-drive vehicles, sustainable power system so as to avoid crisis in the '20's

---

Robert Riley
cONSULTANT
Ward Associates
San Diego CA

Author "detroit...why the circus left town"

Email Sender View Thread
Recommend Forward Flag as
Inappropriate

top previous next

5. Re: Electronic Content in Modern Cars

Reply All Reply All

Aug 24, 2015 8:14 AM
Robert Gruszczynski

EDR = Event Data Recorder

These devices can be voluntarily installed (read "NOT REQUIRED") by a vehicle manufacturer to record short-term events before and after a crash event. If installed, the data and other aspects are specified in Federal Regulation - 49 CFR part 563.

I hope this helps.

Robert Gruszczynski
OBD Communication Expert
Volkswagen of America
Willis MI

Email Sender View Thread Recommend Forward Flag as Inappropriate

top previous

6. Re: Electronic Content in Modern Cars

Reply All Online | Reply All Email

-

Jerry Alcone

Email Sender View Thread Recommend Forward Flag as Inappropriate

My Subscriptions. To unsubscribe from this community discussion, go to Unsubscribe.

To: Chapman, Apple[Chapman.Apple@epa.gov]
Cc: Fried, Gregory[Fried.Gregory@epa.gov]; Ortega, Kellie[Ortega.Kellie@epa.gov]; Christopher Thompson (Thompson.Christopher@epa.gov)[Thompson.Christopher@epa.gov]
From: Belser, Evan
Sent: Tue 8/25/2015 1:31:32 PM
Subject: RE: AED general agenda

No problem.

Agenda so far:

Non-Responsive

Vehicle and Engine:

- VW

Non-Responsive

From: Chapman, Apple
Sent: Tuesday, August 25, 2015 9:13 AM
To: Belser, Evan
Cc: Fried, Gregory; Ortega, Kellie
Subject: AED general agenda

Evan,

I have one issue to add to the agenda:

Non-Responsive

Thanks for putting it together.

Apple

Ms. Apple Chapman

Associate Director, Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave. NW, Washington DC, 20004

202-564-5666 (office)

202-841-6076 (cell)

To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Tue 8/25/2015 3:08:48 PM
Subject: RE: VW324-5-0017/16

Sounds good. We will see you in the morning.

Thanks.

Regards,

Greg Allen

VWGoA EEO

Work: (248) 754-4209

Cell: (989) 875-9031

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Tuesday, August 25, 2015 11:06 AM
To: Allen, Gregory (EEO) <Gregory.Allen@vw.com>
Cc: Snyder, Jim <Snyder.Jim@epa.gov>
Subject: VW324-5-0017/16

Good morning Gregory,

As the schedule is fluid, let's shoot for 7:00 am. If things change, I'll contact you by phone or e-mail.

Thanks,

Vince Mazaitis

To: Shinkman, Susan[Shinkman.Susan@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Brooks, Phillip
Sent: Tue 8/25/2015 7:15:50 PM
Subject: VW

I spoke with Todd Sax (CARB). We will set up a coordinating call early next week. I left a message for Ellen Peter (CARB).

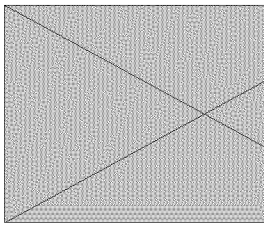
Sent from my iPhone

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Wed 8/26/2015 8:04:27 AM
Subject: Chinese Automakers Retrench as Iran's Market Reopens

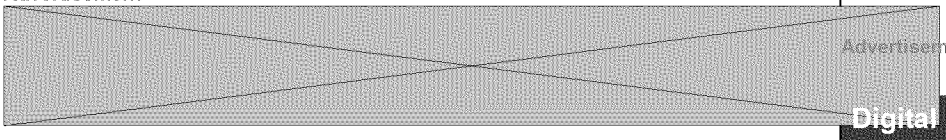
View Web Version | Add to Safe Sender List

WardsAuto OEM Edition

August 26, 2015



Advertisement



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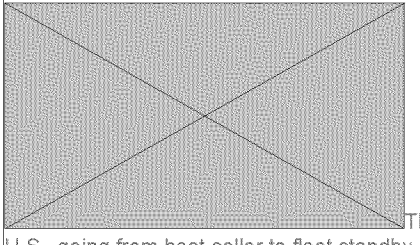
Digital Magazine

- Read the Current Issue

Ford Polishes Taurus' Tarnished Image for China



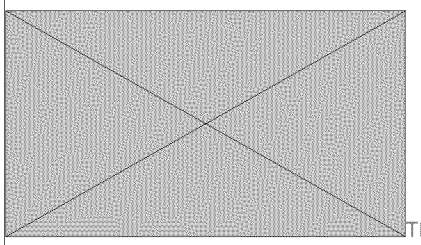
The Taurus has a checkered history here in the U.S., going from best-seller to fleet standby in just a few decades. Ford hopes to leave that behind in China with a model designed exclusively for that market.

FULL ARTICLE

Advertisement

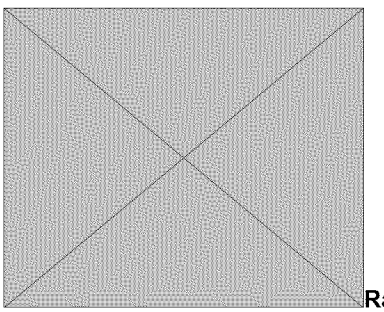
Fuel Economy. Emissions. Safety. Comfort. Power. Thermal Management. Electrification.
You have challenges. Schaeffler has solutions.
As an award-winning systems partner of the automotive industry, we're hard at work developing tomorrow's solutions – today.
Schaeffler and its INA, LuK and FAG Brands: Together we move the world … so you can move the world.
Click Here

Audi Unveiling 310-Mile EV Concept at Frankfurt

 The Audi e-tron Quattro concept builds on drivetrain technology from the Audi R8 e-tron, an electrically driven sports car from the German automaker on sale this year in limited quantities.

FULL ARTICLE

Advertisement

 **Rapid Manufacturing for Metals**
Proto Labs' latest materials-focused white paper explores metal properties and the molding, machining and 3D printing processes used to manufacture quick-turn parts. The paper examines materials ranging from soft metals like aluminum and magnesium to hard metals like steel and stainless steel. Learn which materials bring added strength, reduced weight and other benefits that help determine the right path to metal prototypes and low-volume production parts.

Activist UAW Members Look to End Tier 2, Pump Up Wages

Some officials express concern the union is more focused on maintaining its strike fund than using it to push for real economic gains, and they are putting the executive board on notice. “We have expectations,” notes one activist member.

FULL ARTICLE

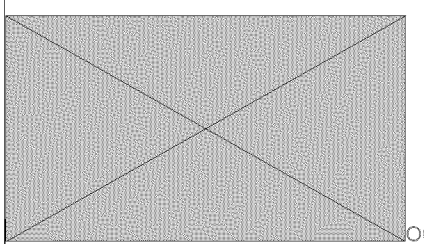
North America Light-Vehicle Production Sets July Record

Advertisement

Advertisement

Digital Magazine

- Read the Current Issue

 Output from January-July totaled 10,068,678 units, the first 10-million-plus outcome for the period since 2000.

FULL ARTICLE

Advertisement

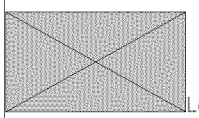
The race to 54.5 mpg by 2025 is on.
ArcelorMittal's commercially available advanced steel grades, coupled with emerging and longer-term breakthrough steels, provide Body-in-White weight reduction solutions that will help automakers achieve 54.5 mpg by 2025, at a lower cost – and with lower total life cycle CO2 emissions – than competing materials. Click Here

3D Printing Will Change Auto Industry, From Manufacturers to Dealers

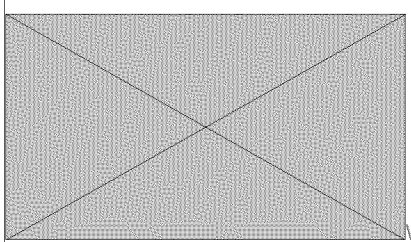
Carlisle & Company predicts up-and-coming technology will allow auto dealerships to make about a third of their replacement parts.

FULL ARTICLE

Autoline Daily

 Long-time automotive journalist and Ward's columnist John McElroy presents his take on the top industry news of the day.

Chinese Automakers Retrench as Iran's Market Reopens

 With the lifting of sanctions against Iran in exchange for curtailing its nuclear program, Chinese automakers will face more competition as other foreign companies step up production in the country, increase imports, or both.

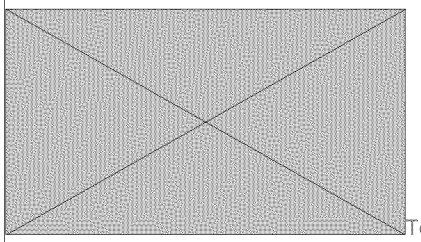
FULL ARTICLE

Google Not Going It Alone With Autonomous Car

Chris Urmson, who heads Google's self-driving car project, acknowledges established suppliers have played an important part in the effort.

FULL ARTICLE

Lexus NX Supply to Remain Static; Dealers 'Emotional' Over LS Decline

 Toyota builds the NX in Kyushu, Japan, for 89 markets and in 2015 could allot only about 40,000 units for export to the U.S.

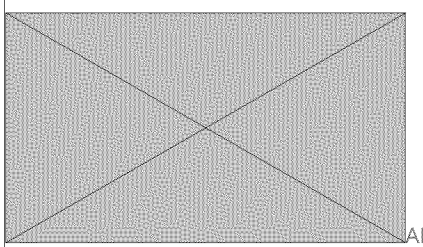
FULL ARTICLE

Lexus Refreshes LX SUV, GS Sedan

The brand is hoping LX sales can reach 5,000 units in its first full year in the U.S. and that the new model can gain ground on the Cadillac Escalade and other large luxury SUVs.

FULL ARTICLE

Researchers Look to Keep Wildlife Out of Harm's Way

 Although picture-based warning signs outperformed word-based warning signs, both RADS versions caused drivers to reduce their speed and brake earlier.

FULL ARTICLE

Volvo Bolsters China Presence With JV Acquisitions

The JVs include car-manufacturing facilities in Chengdu and Daqing, an engine-production facility in Zhangjiakou and an R&D center in Shanghai.

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Information Technology Making Mean Streets Less Mean

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Lexus Targets German Rivals With 4-Cyl. GS

ROAD AHEAD BLOG

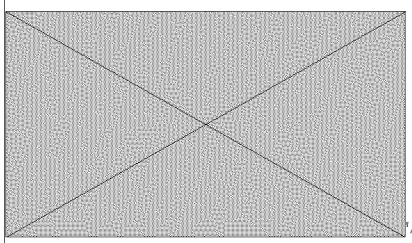
While private vehicle ownership is not particularly desirable, it can be regulated economically while complementing growth of the transportation "sharing economy" specialists in urban mobility say.

Both Audi and BMW have reached 4-cyl. penetration rates as high as 40% in their A6 and 5-Series sedans, so Lexus hopes to gain ground in the segment by offering a 241-hp 2.0L turbo-4 in the midsize sedan in '16.

FULL ARTICLE

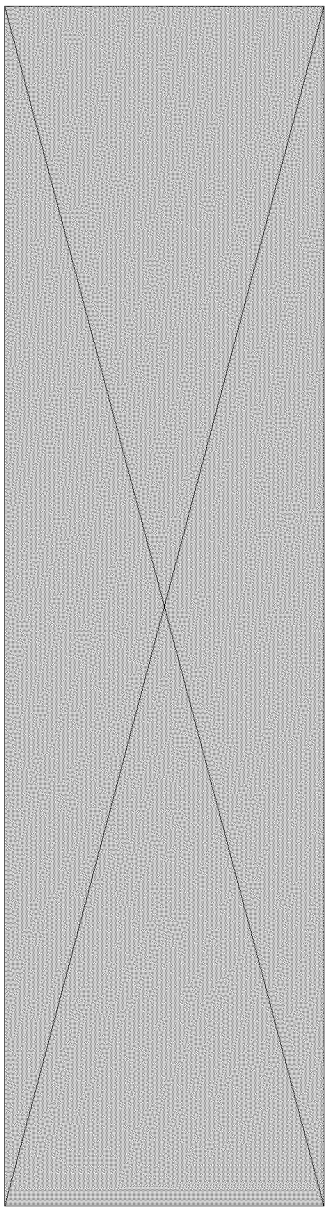
FULL ARTICLE

WardsAuto Flashback – August 2015



'40-Model Output Up; Land Cruiser Returns; Rural Car Demand Off; Post War Output Rises; M-H Restarts Ford 4x4s; Auto Spiffs a Record; VW Buys U.S. Plant; A/C Soars; Record truck Output; Car Phones Grow; OHC for Pontiac; GM Quality Boost; Chrysler Seeking Partner; Light-truck Engines Surveyed;

FULL ARTICLE



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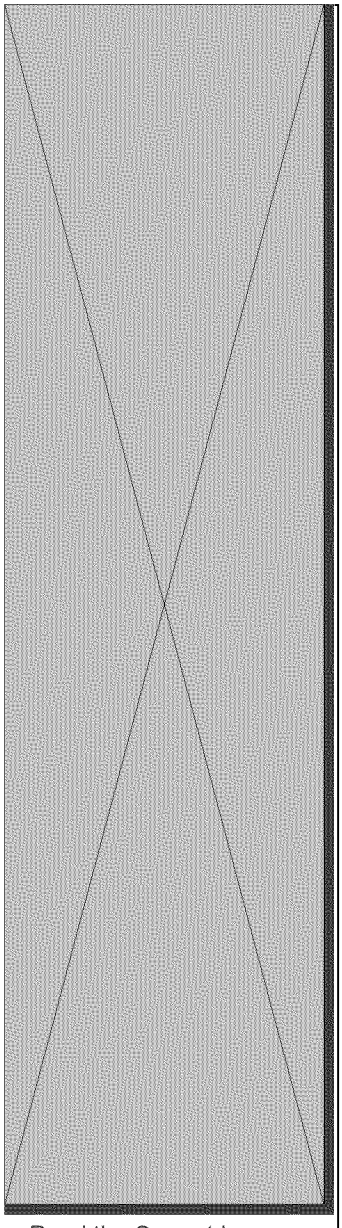

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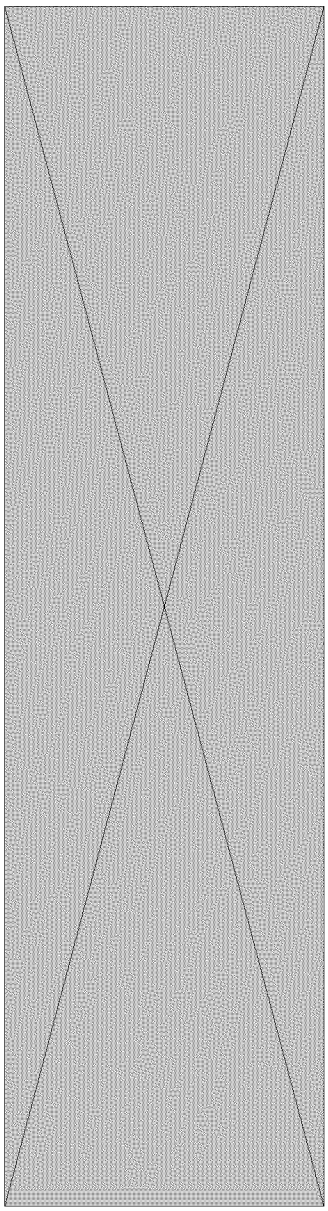

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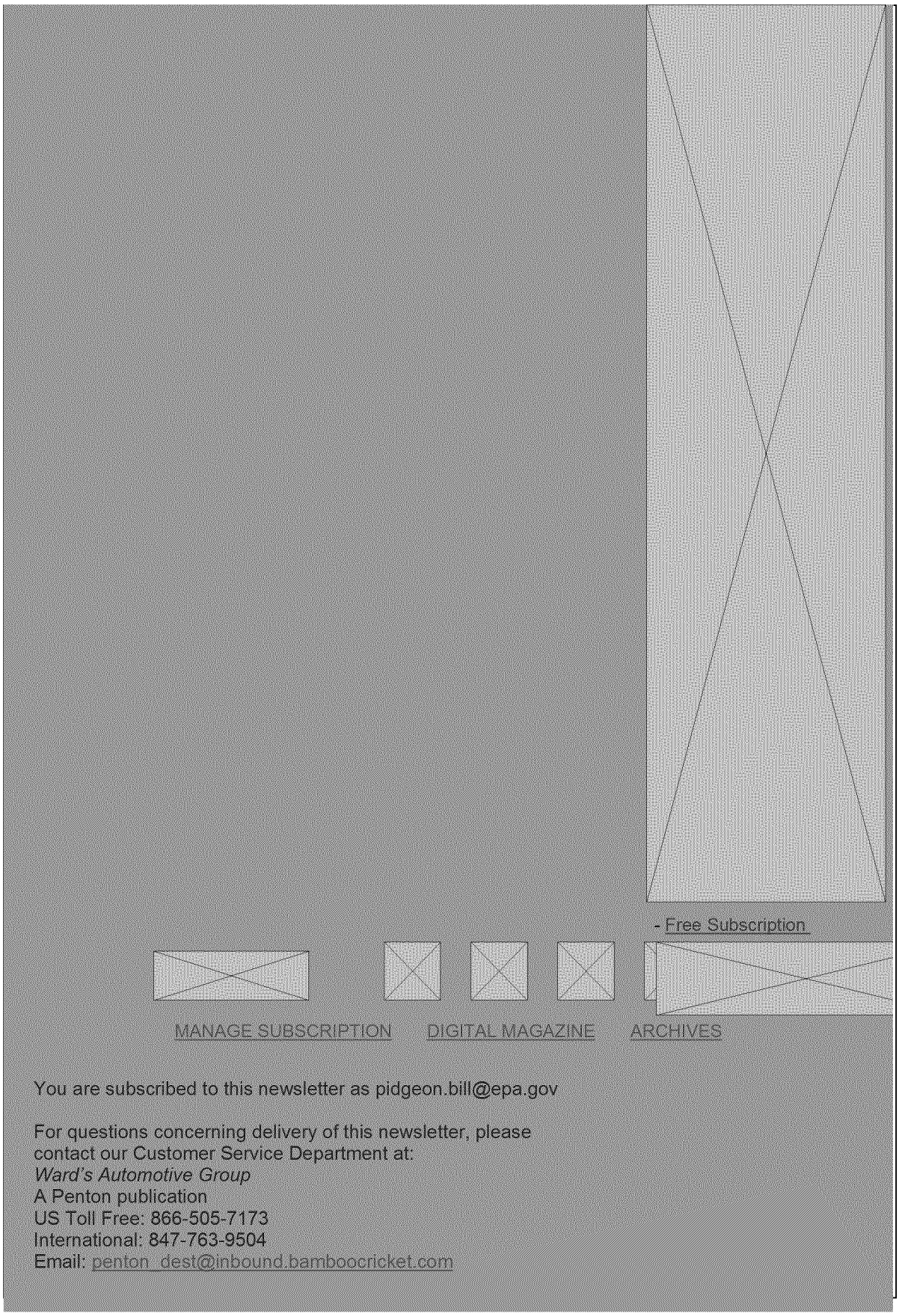

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To: Wright, DavidA[Wright.DavidA@epa.gov]
From: SAE Member Connection
Sent: Wed 8/26/2015 10:36:57 AM
Subject: Open Forum Digest for Tuesday August 25, 2015

[redacted]

Open Forum

Post New Message Online Post New Message via Email

Aug 25, 2015

started 19 hours ago, Yuzhen Yang (2 replies)

Does anyone has a program of any type to convert accelerometer measurement to strain?

1Our FEA analysts ask for strain data to... Yuzhen Yang

2Well the easy way for you is to ask them to do... Jerry Alcone

3Another approach is to throw the accel

away,... Jerry Alcone
started yesterday, Robert Riley (3 replies)

Verification of current recall programs

4 There is a saying - "when you're in a hole · ... Philip Stunell

5 Anti-government attitudes even to the extent of... Richard Vance

6 Most companies do a poor job of evaluating the... Jerry Alcone
started yesterday, Jerry Alcone (11 replies)

Help! my 2002 S10 eats Right Rear turn signal bulbs

7 Replace it with an LED? John Wade

8 Thanks John good idea I'll see if I can find an... Jerry Alcone

9 For both of your issues, I would check for bad... David Plopa

10 Thanks David I will check it out Jerry Alcone

11 I'll second the bad ground. If the ground is bad... Nathan Taylor

12 I was wondering if for some reason extra... Jim Wilson

13 Thanks Jim, I have replaced blower motor twice,... Jerry Alcone

14 Jerry, As far as your GM product "eating" light... Greg Barnett

15 Thanks Greg I too was thinking weird vibration... Jerry Alcone

16 I recommend the following steps to troubleshoot... William Dawson

17 Thanks William, no trailer harness, no moisture... Jerry Alcone

started yesterday, Jerry Alcone (1 reply)

Your favorite story about non-technical types over ruling engineering decisions for cost or schedule reasons.

18 What obviously has to be the decision to launch... Richard Vance
started 2 months ago, Jerry Alcone (54 replies)

Electronic Content in Modern Cars

19 The event data recorder functionality is built... Wade Bartlett

28 Sorry sometimes my humor gets away from me. One... Jerry Alcone

21 The keyless igniton car I had before had the... Ray Kremer

top next

1. Does anyone has a program of any type to convert accelerometer measurement to strain?

Reply Reply

Aug 25, 2015 9:26 AM

Yuzhen Yang

Our FEA analysts ask for strain data to correlate the analysis. But most of the time it is very difficult to do in the field on a combine. I am wondering if anyone knows a way to convert accelerometer measurement to strain? Thank you.
Yuzhen Yang

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2. Re: Does anyone has a program of any type to convert accelerometer measurement to strain?

Aug 25, 2015 10:55 AM

Jerry Alcone

Well the easy way for you is to ask them to do it in their FEA program. They should be able to calc the accelerations at the test point. Don't forget to include the mass of the accelerometer in the FEA analyses.

Jerry Alcone
Retired
Albuquerque NM

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3. Re: Does anyone has a program of any type to convert accelerometer measurement to strain?

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–

Jerry Alcone

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4. Re: Verification of current recall programs

Aug 25, 2015 6:33 AM

Philip Stunell

There is a saying - "when you're in a hole · stop digging!"

Reading the Valukas Report it is evident that GM's initial errors in the design of the switch were compounded by ignoring all the evidence that this was a problem -

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subsequent recalls - would have been trivial in 2002-4 and it seems that GM were 'without excuse'. Once the defect was in production nobody wanted to admit that there was a problem or escalate the issue internally, and the management culture (plausible deniability and 'Teflon management') sealed their fate - contributing to 1 fatality per month for the next ten years. (This is not a 'unique failure' - and the common factors are 'management culture' and 'poor engineering')

The cost of 'corrective actions' grows rapidly once you are in production - with compound interest as the vehicle fleet grows and graves are dug. However, that future cost is hidden from the decision makers and will not affect the calculations of this year's bonus - while

slipping the product launch would.

I agree that there is problem with 'driver's who don't understand the machine' and those who refuse to wear a seat-belt - but that does not excuse 'willful negligence' the design and production of the cars we drive -

For more info Product Liability Training - Stunell Technology

View this on Stunell >

Regards

Phil

Philip Stunell
Director
Stunell Technology Ltd
Leyland

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5. Re: Verification of current recall programs

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-

Richard Vance

'

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6. Re: Verification of current recall programs

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Jerry Alcone

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7. Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

Aug 25, 2015 5:46 AM

John Wade

Replace it with an LED?

John Wade
Mechanical Designer
Doncaster

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8. Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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-

Jerry Alcone

'

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9. Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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David Plopa

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10 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

Reply All Online | Reply All Email

-

Jerry Alcone

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11Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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Nathan Taylor

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12 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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-

Jim Wilson

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13 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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-

Jerry Alcone

'

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14 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

Aug 25, 2015 12:17 PM

Greg Barnett

Jerry, As far as your GM product "eating" light bulbs, I do not have a clue. Mine does the same thing. I was chalking it up to excess vibration in that corner of the car. The socket and fuse show nothing unusual in terms of bad connections. Voltage and available amperage are OK. Brilliance of bulbs (measured at night) is the same from left to right. Case of go figure.

As far as your series resistor and controller burning up, look to a motor with a dragging armature. Could very well be fan scraping on fan housing or

worn armature bushing. Replace fan, fan relay and motor assembly. If you have automatic air, replace the fan controller too. An electric motor is nothing more than a dead short until the armature begins to turn. Cause increased friction or drag on the armature, you move toward "locked rotor amperage". This blows up the series resistor and can burn up a fan switch that isn't protected by a relay and/or speed controller.

As a safety check, run engine at 1500-1800 rpm and check for AC voltage "ripple" at the B+ terminal of alternator and casing. Guideline is no more than 5 volts AC ripple or else you will start blowing up computerized modules in an erratic manner.

Greg Barnett
President
Barnett Automotive Engineering
Costa Mesa CA

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15 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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Jerry Alcone

Thanks Greg I too was thinking weird vibration on that corner, even balanced the tires. Going to look over the shoulder of teck when they dig into fan problem. They put up with me doing so because I often trouble shoot their mystery problems on customer cars and their race cars.

Jerry Alcone
Retired
Albuquerque NM

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16 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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-

William Dawson

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17 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

Reply All Online | Reply All Email

–

Jerry Alcone

I

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18 Re: Your favorite story about non-technical types over ruling engineering decisions for cost or schedule reasons.

Reply Reply

Aug 25, 2015 9:22 PM

Richard Vance

That obviously has to be the decision to launch the Challenger after a night colder than they had data for.

Richard Vance
Huntaville, AL

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19Re: Electronic Content in Modern Cars

-

Wade Bartlett

'

Vehicle Crash Data Retrieval, CDR Vehicle Coverage List

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20Re: Electronic Content in Modern Cars

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-

Jerry Alcone

I

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21Re: Electronic Content in Modern Cars

Reply Reply

Aug 25, 2015 2:01 PM

Ray Kremer

The keyless igniton car I had before had the transmitter/key unit such that you had to bring it in to the dealer to get the battery replaced. After one went dead I switched to the other one. When that went dead it was close enough to the end of my lease that I still didn't bother and just used the concealed actual key and keyhole to open the door, and touching the transmitter to the ignition button while pressing it to start the car (RFID or something?).

The brand of car I have currently, the transmitter/key unit (for both full keyless ignition and lesser models like mine that

merely have remote door locks) opens easily and has a standard size button battery that is fully replaceable by the user. Battery hasn't run out on me yet though, I rarely use the remote door locks because it's really not that much effort to unlock my door with the physical key.

I also override the "auto" air conditioner controls a lot. Even though the temperature it set to 72°, I really don't see the need to run the fans at full blast just because it's 80° out when I start my car, and I would have to turn the radio volume up to be able to hear it. Better to just manually turn the fan down to a lower setting.

We are ceding so much control to our technology that claims to know what we want before we do ourselves, and so

much of the time it really doesn't and just makes thinks harder to deal with.

Ray Kremer
Manager
Stellar Solutions
McHenry IL

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electric vehicles

Carline Name	Vehicle Class, Body Type, Pass/Cargo Volumes	Type of Battery	Trans Type	Motor Size Type	Energy Consumption (kW-hr/100mi)	Driving Range (miles)
A3 e-tron	Compact Hatchback-89/14	Lithium-Ion	A6	80 kW AC Induction	NA	NA
A3 e-tron Ultra	Compact Hatchback-89/14	Lithium-Ion	A6	80 kW AC Induction	NA	NA

other alternative fueled vehicles

Carline Name	Vehicle Class, Body Type, Pass/Cargo Volumes	Trans Type	No. of cyl.	Engine	Fuel Type	Miles Per Gallon City	Miles Per Gallon Hwy	Driving Range (miles)
A3 e-tron	Compact Hatchback-89/14	A6	4	1.4L	Gasoline/Electric	NA	NA	NA
A3 e-tron Ultra	Compact Hatchback-89/14	A6	4	1.4L	Gasoline/Electric	NA	NA	NA

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Ah yes, the eternal favorite: cars we long for, but are kept from the U.S. market by bureaucrats, executives, or marketing people. A lot of models, unfortunately, simply don't resonate here in the States; they include expensive minicars, sleek station-wagons and, that darling of auto journalists, so many torque-rich diesels. Some brands are missing entirely – fans of French cars, you know our pain – and others are hidden gems hidden deep amongst much larger, more well-known parent companies. Ahem, that would be you Volkswagen Group, along with your beguiling, Czech-based Skoda brand. This is why we compiled a list of ten current European cars and crossovers, our top pick of vehicles we'd love to see the jump across the Atlantic. You can't argue that they would make some rather colorful additions to U.S. roadways – go on, admit it, the Martian-like Citroen Cactus wagon is calling you. So dust off your passport, break out those Berlitz language guides, and let's go for an all-American roadtrip with a dash of European panache. 1. Audi S1 The Audi A1 is Ingolstadt's version of the diminutive VW Polo, which isn't sold here because, well, it's too small. That goes for both the VeeDub, and its Audi spin-off. As for the S1, it's the crazy top-of-the-line performance variation. Fitted with quattro all-wheel drive, a turbocharged 2.0-liter four that produces 230-horsepower, and a six-speed manual, it puts the larger VW GTI to shame - and is a far better car than the somewhat compromised and silly-looking Mini John Cooper Works. Audi's S1 is the ultimate pocket rocket. 2. BMW M550d xDrive Yes, BMW now gives us some diesels, but not the truly great ones. One of these great ones is the tri-turbocharged M550d xDrive, which produces 376-horsepower, along with enough torque (576 lb.-ft., to be exact!) to move your house off its foundation. On country roads, this 5-series feels heavy, because it is. But you have to experience how it charges forward when the left lane of the autobahn clears up. All the way to its top speed of 155 mph, at which time the speed governor cuts in quite rudely, right in the middle of our diesel-fueled driving fun. 3. Citroen C4 Cactus The Citroen C4 Cactus is a car that only the French could do. Every single detail has been rethought, and thus, its side panels are graced with large air bumps that protect the body, the passenger air bag is roof-mounted, and when fitted with an automatic transmission, the front seat becomes a bench. Most carmakers, we are afraid, would have made this car look "friendly" or retro and cute. The French made it futuristic, unapologetic, and incredibly cool, and for that reason we want to see it Stateside as soon as possible. 4. Dacia Duster Dacia started out assembling Renaults when Romania was an especially dark corner of the Eastern Bloc. Now it is Renault's low-cost brand, and the entry-level prices are incomparably low. Owning a Dacia tells the world that you don't care the slightest bit about status and social hierarchy. Which, especially if you are way up on the social ladder, can be a rather sophisticated (okay, maybe a little arrogant) statement in itself. The Duster is Dacia's blocky off-roader and we like it best when kept simple, complete steel wheels and unpainted bumpers. 5. Mercedes-Benz C 180d An old Mercedes diesel is kind of a "hippie" statement. Remember the oil-burning Benz sedans of the 1960s and 1970s? Yes, they were slow as molasses, but their drivers had opted out of the race to dominate the passing lane, in favor of a far mellower Mercedes experience. Today's U.S.-market diesels from Stuttgart are a different breed: Fast, efficient, a sportier alternative to a gas-powered hybrid. European buyers, on the other hand, can slow things down in the C 180 d. It's powered by a

Renault-sourced 113-horsepower diesel and fitted with a surprisingly slick manual transmission, or Benz's own optional slushbox. A zero-to-sixty time of 11.1 seconds provides ample time for contemplation while everyone else scrambles to get ahead. 6. Opel Insignia Sports Tourer OPC The Opel Insignia is the sister model of the Buick Regal, and it is a truly great car. Even a cursory study of the German price list reveals that the model portfolio in the U.S. is sadly compromised, however. We'd spec the ultimate Regal/Insignia with the thirsty but silky-smooth 320-horsepower V-6, opt for the manual transmission and the governor override, and of course go for the station wagon body. We'd call this 165-mph missile the Buick Regal Grand National Estate. And yes, believe it or not, we think people would buy it. 7. Peugeot 308 GTi The French have always built some of the most interesting "hot hatches," and we are happy to report that Peugeot is on a mission to rediscover its soul. Of course, this comes after a number of years wasting too much time and resources bland models that aimed to pleased everybody – and inspired nobody. The 308 GTi makes a stunning 268-horsepower and comes with a six-speed manual and locking diff. The optional two-tone paint scheme makes it look like a concept car that just rolled from an auto show onto a public road. Yes, a GTI is very nice. We'll just take the one from France. 8. Renault Espace Written off as seriously uncool by all but a few Asian brands (and even those efforts aren't particularly interesting), the minivan seems to have fallen by the wayside. Not so at Renault! The company that virtually invented the minivan in the early 1980s with the hugely popular Espace has now re-imagined it as an ultra-futuristic crossover. We're here to tell you the top-level trim is as sumptuous as it is elegant. Yes, there really is a minivan you'd want to be seen in. It's called the Renault Espace Initiale Paris – and it's as practical as it is pretty. 9. Skoda Superb For a VW Group car that annoys the heck out of VW executives, behold the (pretentiously named) Skoda Superb. Built atop the Group's modern MQB platform, it is a cheaper and far better-looking variation of their own European-market Passat, which wears way too much chrome - and looks like it's been hit with a large shovel. European markets agree, Skoda's top-level entry is turning into a smashing success thanks to elegant design, refined dynamics, and smart pricing. 10. Volkswagen Up! Even smaller than the Polo, this entry-level Volkswagen is striking in its simplicity and Bauhaus-inspired product design philosophy. It was launched with a 60- and 75-horsepower 3-cylinder engine, but the Up! just gained a 105-horsepower turbocharged motor in the Brazilian market. We think the little Up! captures the pure essence of the brand better than any other VW. If you appreciate product design and contemporary architecture, you would love this minicar. It's also easy to park and cheap to buy. We give that two thumbs...Up!

View article...

To: 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.org]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; Glodich, Jeffrey (J.M.)[jglodich@ford.com]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]
From: Glodich, Jeffrey (J.M.)
Sent: Wed 8/26/2015 4:30:46 PM
Subject: Upcoming SAE LDVP Committee Meetings

All,

Please send me your input on the following proposed dates for the next J1634 and J2263 meetings:

SAE J1634 Sept 17th

SAE J2263 Sept 24th

Thanks,
Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

To: Glodich, Jeffrey (J.M.)[jglodich@ford.com]; 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.org]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; Will Meschievitz (TEMA TTC)[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]
From: Tom Beierschmitt (TEMA TTC)
Sent: Wed 8/26/2015 4:40:23 PM
Subject: RE: Upcoming SAE LDVP Committee Meetings

●● PROTECTED 関係者外秘

OK with me

Tom Beierschmitt Sr.

From: Glodich, Jeffrey (J.M.) [mailto:jglodich@ford.com]
Sent: Wednesday, August 26, 2015 12:31 PM
To: 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; "Beth Perry <eperry@sae.org>" <BethPerry; 'Bob Maxwell'; brian.mace@horiba.com; Buller, Patrick; 'Carl Paulina'; Chris Nevers; Christopher J Twarog ; david.woods@chrysler.com; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; Glodich, Jeffrey (J.M.); guanghui.cai@gm.com; 'Jeff Foor'; Jenny.Sigelko@vw.com; JNIKEUS@volvocars.com; 'Keith Thompson'; kyle.bedsole@gm.com; 'Mahmoud Yassine'; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z. Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)'; sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com;

Suanne.Thomas@vw.com; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; Vineet Mehta; William Beggs <william.beggs@gm.com>; 'William Ott'; Will Meschievitz (TEMA TTC); Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.)
Subject: Upcoming SAE LDVP Committee Meetings

All,

Please send me your input on the following proposed dates for the next J1634 and J2263 meetings:

SAE J1634 Sept 17th

SAE J2263 Sept 24th

Thanks,

Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Wed 8/26/2015 5:45:52 PM
Subject: RE: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

Ex. 5, 7

Ex. 5, 7 And would appreciate any thoughts you might have on getting up to speed in that area.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Belser, Evan
Sent: Wednesday, August 26, 2015 1:15 PM
To: Kaul, Meetu
Subject: FW: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

From: Belser, Evan
Sent: Monday, August 24, 2015 12:09 PM
To: Orehowsky, Gregory
Subject: FW: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

From: Bunker, Byron
Sent: Monday, August 24, 2015 12:01 PM
To: Grundler, Christopher
Cc: Brooks, Phillip; Belser, Evan
Subject: FW: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

Ex. 4, 5, 7

Regarding **Ex. 7** offer to meet, I am going to simply send a note saying that I will follow up later.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From Ex. 7
Sent: Monday, August 24, 2015 11:39 AM
To: Bunker, Byron; Wehrly, Linc
Subject: FW: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

Hello Byron and Linc,

Ex. 4, 7

If you would like me to come in and explain further I am willing to do that.

Let me know what you would like to do,

Ex. 7

To: Glodich, Jeffrey (J.M.)[jglodich@ford.com]
Cc: 'ball.joel@epa.gov'['ball.joel@epa.gov']; 'RMiller@hatci.com'['RMiller@hatci.com']; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; brian.mace@horiba.com[brian.mace@horiba.com]; Christopher J Twarog [christopher.twarog@gm.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; Chris Nevers[CNevers@autoalliance.org]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.orgeperry]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'Duoba, Mike'[mduoba@anl.gov]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; 'Mahmoud Yassine'[mky@chrysler.com]; 'mark paxton'[mpaxton@ganassi.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; Yuhase, Nicole (L.)[nyuhase@ford.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; 'Berg, Olle ()'[olle.berg@volvocars.com]; Ott, William[ott.william@epa.gov]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'Bob Maxwell'[remaxwell@comcast.net]; 'Roxanne Loeffler'[rloeffler@sae.org]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; sconrad@hatci.com [sconrad@hatci.com]; Ex. 6 steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]
From: Dennis Pawlak
Sent: Wed 8/26/2015 6:22:15 PM
Subject: Re: Upcoming SAE LDVP Committee Meetings

Those dates are fine with me.

Best Regards,

Dennis M. Pawlak
Manager, Vehicle Verification
Mitsubishi Motors R&D of America, Inc.
dennis.pawlak@na.mitsubishi-motors.com
Office: 734-477-6146 fax: 734-971-0901
Cell: 734-674-4546

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##

From: "Glodich, Jeffrey (J.M.)" <jglodich@ford.com>
To: "'ball.joel@epa.gov'" <'ball.joel@epa.gov'>, "Beierschmitt, Thomas (T.A.)" <tbeiers1@ford.com>, "'Berg, Olle ()'" <olle.berg@volvocars.com>, "\"Beth Perry <eperry@sae.org>\" <BethPerry"<eperry@sae.org>, "'Bob Maxwell'" <remaxwell@comcast.net>, "brian.mace@horiba.com" <brian.mace@horiba.com>, "Buller, Patrick" <patrick.buller@volvocars.com>, "'Carl Paulina'" <Paulina.Carl@epamail.epa.gov>, Chris Nevers <CNevers@autoalliance.org>, "Christopher J Twarog " <christopher.twarog@gm.com>, "david.woods@chrysler.com" <david.woods@chrysler.com>, "'Dennis Pawlak'" <Dennis.Pawlak@na.mitsubishi-motors.com>, "'Douglas Reid'" <Douglas.Reid@na.mitsubishi-motors.com>, "Dr. Robert Otto Rasmussen, PE " <Robotto@TheTranstecGroup.com>, "'Duoba, Mike'" <mduoba@anl.gov>, "Glodich, Jeffrey (J.M.)" <jglodich@ford.com>, "guanghui.cai@gm.com" <guanghui.cai@gm.com>, "'Jeff Foor'" <jdf14@chrysler.com>, "Jenny.Sigelko@vw.com" <Jenny.Sigelko@vw.com>, "JNIKEUS@volvocars.com" <JNIKEUS@volvocars.com>, "'Keith Thompson'" <Keith.Thompson@bepco.com>, "kyle.bedsole@gm.com" <kyle.bedsole@gm.com>, "'Mahmoud Yassine'" <mky@chrysler.com>, "Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>" <michel.mahrous@fcagroup.com>, "'Marc Belzile'" <marc.a.belzile@tc.gc.ca>, "'mark paxton'" <mpaxton@ganassi.com>, "Mccarthy, Chris (C.)" <CMCCAR61@ford.com>, "'Meyer, Norm'" <norm.meyer@tc.gc.ca>, "mike.timmerman@horiba.com" <mike.timmerman@horiba.com>, "Okawa, Naoyasu (N.)" <okawa.n@mazda.co.jp>, "Peabody, Jason (J.A.)" <jpeabod6@ford.com>, "'Peter Z. Janosi'" <peter.janosi@roush.com>, "'RMiller@hatci.com'" <'RMiller@hatci.com'>, "'Roxanne Loeffler'" <rloeffler@sae.org>, "'Schlueter, Hannah (EASZ/1)'" <hannah.schlueter@volkswagen.de>, "sconrad@hatci.com " <sconrad@hatci.com>, "'snyder.jim@epa.gov'" <'snyder.jim@epa.gov'>, "Steve Karamihas" <stevemk@umich.edu>, "steve.baldus@gm.com" <steve.baldus@gm.com>, "Suanne.Thomas@vw.com" <Suanne.Thomas@vw.com>, "'tom.beierschmitt@tema.toyota.com'" <'tom.beierschmitt@tema.toyota.com'>, "'tommy_chang@ahm.honda.com'" <'tommy_chang@ahm.honda.com'>, Vineet Mehta <vineet@teslamotors.com>, "William Beggs <william.beggs@gm.com>" <william.beggs@gm.com>, "'William Ott'" <Ott.William@epamail.epa.gov>, "william.meschievitz@tema.toyota.com" <william.meschievitz@tema.toyota.com>, "Wright, DavidA" <Wright.DavidA@epa.gov>, "yosuke_sato@ahm.honda.com" <yosuke_sato@ahm.honda.com>, "Yuhase, Nicole (L.)" <nyuhase@ford.com>
Date: 08/26/2015 12:30 PM
Subject: Upcoming SAE LDVP Committee Meetings

All,

Please send me your input on the following proposed dates for the next J1634 and J2263 meetings:

SAE J1634 Sept 17th

SAE J2263 Sept 24th

Thanks,
Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

To: Ex. 7 @vw.com]
Cc: Ex. 7 @vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]; Ex. 7 Ex. 7 @vw.com]
From: Good, David
Sent: Wed 8/26/2015 6:48:30 PM
Subject: RE: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Ex. 4 - CBI

Ex. 7

Attached are the 2016 FE Guide data (where Index 100 uses the 2017 derived 5-cycle equation) and my edits to your 2016 placeholder file (FYI).

Ex. 4 - CBI

Let me know if you see any problems with my edits to your Placeholders.

Dave

From: Ex. 7 @vw.com]
Sent: Wednesday, August 26, 2015 7:11 AM
To: Good, David
Cc: Ex. 7 (EEO); Snyder, Jim Ex. 7 (EEO)
Subject: RE: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Hi Dave;

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

If you have any questions, please let me know.

Best regards,

Ex. 7

Ex. 7

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Ex. 7

Fax: 248 754 4207

mailto: Ex. 7

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, August 21, 2015 10:47 AM
To: Ex. 7 @vw.com>
Cc: Ex. 7 @vw.com>; Snyder, Jim <Snyder.Jim@epa.gov>
Subject: re: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Ex. 7

re: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Attached are the data in Verify as of August 20, 2015 6AM. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov or included in the 2016 Printed Guide. Note that there are separate tabs for EV, PHEV, and fuel cell vehicles (if applicable). Please make any needed corrections to Verify when you get a chance. Please enter new data in Verify for any missing labels.

-

Printed Guide – For the 2016 Printed Guide, I will send all error-free data in Verify to DOE on September 2, 2015, regardless of release date. The data will not be released outside of EPA & DOE offices until the week of November 16, 2015, when 2016 Printed Guides are scheduled to be mailed to dealerships, libraries and credit unions, ref. EPA guidance letter CD-15-16, July 20, 2015. Please email me if there are data in Verify which you do not want included in the 2016 Printed Guide.

Next Web Update - The next normal posting of 2015 & 2016 FE Label data will be on August 25, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later). Again on September 2, 2015, I'll send the error-free data in Verify (which is releasable) to DOE to update www.fueleconomy.gov, business-as-usual.

Using the 2017 Derived 5-Cycle Equation for 2016MY Vehicles: If you are voluntarily using the 2017 derived 5-cycle equations for any 2016 model year vehicles, please send me the 2016 Index number(s) of the affected vehicles so I can build them into the macro. See EPA Guidance Letter CD-15-15, June 22, 2015 for additional information about the revised derived 5-cycle equation.

Placeholders for the 2016 Printed Guide are due to EPA on Aug 20, 2015: If you haven't already done so, please send me an Excel spreadsheet with any fuel cell vehicles, EVs, HEVs, PHEVs, FFVs and any other alternative fuel vehicles which won't be labeled in Verify by September 1, 2015. [Please don't include placeholder information for vehicles which are already in EPA's Verify database (or will be in Verify by September 1, 2015).] See Enclosure 2, Section 3 of EPA Guidance letter CD-15-16 for additional information about placeholders.

Reminders:

- Please double check the attached data in Verify for accuracy, missing labels, etc.
- September 1, 2015 is the last day to make changes for the 2016 Printed Guide.
- If you enter new label data into Verify before September 2, 2015, please double check it carefully for accuracy.

Please send me a short email when your 2016 FE Label data in Verify are "good to go."

Please send me your placeholder spreadsheet as soon as possible.

Thanks

Dave

Volkswagen Group - 2016 Placeholders for the 2016 Printed Guide

w/D. Good edits

PHEVs:

Carline Name	Vehicle Class, Body Type, Pass/Cargo Volumes	Trans Type	No. of cyl.	Engine	Type of Battery	Motor Size Type	Fuel Type	Energy Consumption (kW-hr/100mi) City	Energy Consumption (kW-hr/100mi) Hwy	Miles Per Gallon City	Miles Per Gallon Hwy	Driving Range (miles)
Audi A3 e-tron	Compact Hatchback-89/14	A6	4	1.4L	Lithium-Ion	80 kW AC Induction	Gasoline/Electric	NA	NA	NA	NA	NA
Audi A3 e-tron Ultra	Compact Hatchback-89/14	A6	4	1.4L	Lithium-Ion	80 kW AC Induction	Gasoline/Electric	NA	NA	NA	NA	NA

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Wed 8/26/2015 8:19:53 PM
Subject: RE: VW

Hi Evan,

Can you forward all other attachments and materials you may have?

Thanks,

mk

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Belser, Evan
Sent: Wednesday, August 26, 2015 3:36 PM
To: Goodwin, Ed
Cc: Green, Jay-M; Lynn, Jennifer; Adair, Scot; Amon, Tyler; Youngberg, Jennifer; Orehowsky, Gregory; Kaul, Meetu; Werner, Jacqueline
Subject: Re: VW

Hello everyone, look forward to working with you. Copying my OCE colleagues who should also attend this meeting. My calendar is up to date; I am free tomorrow and Friday afternoon.

Ex. 5, 7

Thanks,

Evan

On Aug 26, 2015, at 3:15 PM, Goodwin, Ed <Goodwin.Ed@epa.gov> wrote:

Good afternoon, friends –

Please see the attached information regarding alleged violations by VW.

Ex. 5, 7

Ex. 5, 7 We'd like to set-up a conference call with Evan Belser (EPA-AED) in the next couple of days to get a better understanding of these allegations, and also decide upon appropriate next steps.

What is everyone's availability for Thursday or Friday?

Thanks in advance, and best regards to all,

Ed Goodwin

ADI-CID

202-564-5918

From: Mazakas, Pam

Sent: Tuesday, August 25, 2015 3:17 PM
To: Parker, Doug
Subject: Fwd: VW

Sent from my iPhone

Begin forwarded message:

From: "Shinkman, Susan" <Shinkman.Susan@epa.gov>
Date: August 25, 2015 at 12:40:43 PM EDT
To: "Barnet, Henry" <Barnet.Henry@epa.gov>, "Mazakas, Pam" <Mazakas.Pam@epa.gov>
Subject: VW

The attached summary has been shared with DOJ. Please let me know if you want to discuss further.

Thanks,

Susan

Susan Shinkman

Director, Office of Civil Enforcement

U.S. Environmental Protection Agency

Washington, DC

202-564-3257

This email is for the intended recipient only and may contain material that is privileged and/or confidential. If you believe you have received this email in error, please notify the sender. Thank you.

<VW Diesel Summary 24 August 2015.docx>

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Wed 8/26/2015 8:26:05 PM
Subject: Fwd: Summary of discussion with Ex. 7 VW 8/21/2015

Thanks,
Evan

Begin forwarded message:

From: "Belser, Evan" <Belser.Evan@epa.gov>
Date: August 24, 2015 at 12:09:31 PM EDT
To: "Orehowsky, Gregory" <Orehowsky.Gregory@epa.gov>
Subject: FW: Summary of discussion with Ex. 7 VW 8/21/2015

From: Brooks, Phillip
Sent: Sunday, August 23, 2015 10:25 PM
To: Bunker, Byron
Cc: Wehrly, Linc; Belser, Evan
Subject: Re: Summary of discussion with Ex. 7 VW 8/21/2015

10:00am would work for me.

Sent from my iPhone

On Aug 23, 2015, at 10:06 PM, Bunker, Byron <bunker.byron@epa.gov> wrote:

Phil,

Can you do a call with Chris and our team sometime tomorrow morning or late afternoon? We would like to make sure we are getting going the right way on this VW issue.

Let me know if you have a free hour and we should be able to make a call work.

Thanks,

Byron

Byron Bunker

US EPA

NVFEL Office Phone (734) 214-4155

DC Office Phone (202) 343-9283

Cell Phone (734) 353-9623

Sent from my cell phone.

On Aug 21, 2015, at 5:12 PM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

Ex. 7

Sent from my iPhone

On Aug 21, 2015, at 4:19 PM, Bunker, Byron <bunker.byron@epa.gov> wrote:

Hi Phil,

In lieu of our call this afternoon, I am sending you this summary of the issued based on a call Linc and I had with Ex. 7 of VW of America this morning and our ongoing coordination with the CARB team.

Ex. 7

Ex. 7

Ex. 7

We will schedule some time to talk about this soon.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Wed 8/26/2015 8:26:49 PM
Subject: Fwd: Conference Call - VW Diesel Update and Next Steps
VW Diesel Summary 24 August 2015.docx
ATT00001.htm

Thanks,
Evan

Begin forwarded message:

From: <Belser.Evan@epa.gov>
Date: August 25, 2015 at 11:16:54 AM EDT
To: Susan Shinkman <Shinkman.Susan@epa.gov>
Cc: Phillip Brooks <Brooks.Phillip@epa.gov>, Jacqueline Robles Werner <Werner.Jacqueline@epa.gov>, Apple Chapman <chapman.apple@epa.gov>
Subject: Fwd: Conference Call - VW Diesel Update and Next Steps

Susan, per your request, I'm forwarding the paper OTAQ prepared regarding VW; as below, this is what I share with DOJ yesterday.

Thanks,
Evan

Begin forwarded message:

From: "Belser, Evan" <Belser.Evan@epa.gov>
Date: August 24, 2015 at 4:21:50 PM EDT
To: Leslie Allen <Leslie.Allen@usdoj.gov>, "Dworkin, Karen (ENRD)" <Karen.Dworkin@usdoj.gov>
Cc: "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>
Subject: FW: Conference Call - VW Diesel Update and Next Steps

From: Bunker, Byron
Sent: Monday, August 24, 2015 8:51 AM
To: Grundler, Christopher; Brooks, Phillip; Belser, Evan; Cook, Leila; Wehrly, Linc;

Manners, Mary
Cc: Hengst, Benjamin
Subject: Conference Call - VW Diesel Update and Next Steps

Attached is a one-pager that summarizes most of what we know right now. I would like to use this at 10 to check for any inconsistencies (does anyone understand something differently) and then to help us identify our next steps.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Wed 8/26/2015 8:27:09 PM
Subject: Fwd: VW

Thanks,
Evan

Begin forwarded message:

From: <Belser.Evan@epa.gov>
Date: August 25, 2015 at 11:21:19 AM EDT
To: "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Subject: Re: VW

Just forwarded the email with attachment.

Thanks,
Evan

On Aug 25, 2015, at 11:20 AM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

Which email was that attached to?

Sent from my iPhone

On Aug 25, 2015, at 11:14 AM, Belser, Evan <Belser.Evan@epa.gov> wrote:

I shared the OTAQ one pager with Karen Dworkin. I thought you shared that with Susan and Cynthia yesterday. We are scheduled to bring this to Susan at the 2pm General today.

Thanks,
Evan

On Aug 25, 2015, at 11:05 AM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

?

Sent from my iPhone

Begin forwarded message:

From: "Shinkman, Susan" <Shinkman.Susan@epa.gov>
Date: August 25, 2015 at 11:01:59 AM EDT
To: "Belser, Evan" <Belser.Evan@epa.gov>
Cc: "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Chapman, Apple" <Chapman.Apple@epa.gov>
Subject: VW

I understand a one pager went to DOJ about this case. Please send me a copy of it.

Susan

Susan Shinkman

Director, Office of Civil Enforcement

U.S. Environmental Protection Agency

Washington, DC

202-564-3257

This email is for the intended recipient only and may contain material that is privileged and/or confidential. If you believe you have received this email in error, please notify the sender. Thank you.

To: Glodich, Jeffrey (J.M.)[jglodich@ford.com]
Cc: Ball, Joel[ball.joel@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Wright, DavidA
Sent: Wed 8/26/2015 10:04:55 PM
Subject: RE: Upcoming SAE LDVP Committee Meetings

Jeff,

Both days will work for me.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Glodich, Jeffrey (J.M.) [mailto:jglodich@ford.com]
Sent: Wednesday, August 26, 2015 12:31 PM
To: 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; "Beth Perry <eperry@sae.org>" <BethPerry; 'Bob Maxwell'; brian.mace@horiba.com; Buller, Patrick; Paulina, Carl; Chris Nevers; Christopher J Twarog ; david.woods@chrysler.com; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; Glodich, Jeffrey (J.M.); guanghui.cai@gm.com; 'Jeff Foor'; Jenny.Sigelko@vw.com; JNIKEUS@volvocars.com; 'Keith Thompson'; kyle.bedsole@gm.com; 'Mahmoud Yassine'; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z. Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)';

sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com; Suanne.Thomas@vw.com; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; Vineet Mehta; William Beggs <william.beggs@gm.com>; Ott, William; william.meschievitz@tema.toyota.com; Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.)
Subject: Upcoming SAE LDVP Committee Meetings

All,

Please send me your input on the following proposed dates for the next J1634 and J2263 meetings:

SAE J1634 Sept 17th

SAE J2263 Sept 24th

Thanks,

Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Thur 8/27/2015 3:28:04 AM
Subject: Exceptional European cars we'd love in the US
MAIL_CONVERSATION_TOPIC: Exceptional European cars we'd love in the US
Created: Fri 3/18/2016 6:18:26 PM

Ah yes, the eternal favorite: cars we long for, but are kept from the U.S. market by bureaucrats, executives, or marketing people. A lot of models, unfortunately, simply don't resonate here in the States; they include expensive minicars, sleek station-wagons and, that darling of auto journalists, so many torque-rich diesels. Some brands are missing entirely – fans of French cars, you know our pain – and others are hidden gems hidden deep amongst much larger, more well-known parent companies. Ahem, that would be you Volkswagen Group, along with your beguiling, Czech-based Skoda brand. This is why we compiled a list of ten current European cars and crossovers, our top pick of vehicles we'd love to see the jump across the Atlantic. You can't argue that they would make some rather colorful additions to U.S. roadways – go on, admit it, the Martian-like Citroen Cactus wagon is calling you. So dust off your passport, break out those Berlitz language guides, and let's go for an all-American roadtrip with a dash of European panache. 1. Audi S1 The Audi A1 is Ingolstadt's version of the diminutive VW Polo, which isn't sold here because, well, it's too small. That goes for both the VeeDub, and its Audi spin-off. As for the S1, it's the crazy top-of-the-line performance variation. Fitted with quattro all-wheel drive, a turbocharged 2.0-liter four that produces 230-horsepower, and a six-speed manual, it puts the larger VW GTI to shame - and is a far better car than the somewhat compromised and silly-looking Mini John Cooper Works. Audi's S1 is the ultimate pocket rocket. 2. BMW M550d xDrive Yes, BMW now gives us some diesels, but not the truly great ones. One of these great ones is the tri-turbocharged M550d xDrive, which produces 376-horsepower, along with enough torque (576 lb.-ft., to be exact!) to move your house off its foundation. On country roads, this 5-series feels heavy, because it is. But you have to experience how it charges forward when the left lane of the autobahn clears up. All the way to its top speed of 155 mph, at which time the speed governor cuts in quite rudely, right in the middle of our diesel-fueled driving fun. 3. Citroen C4 Cactus The Citroen C4 Cactus is a car that only the French could do. Every single detail has been rethought, and thus, its side panels are graced with large air bumps that protect the body, the passenger air bag is roof-mounted, and when fitted with an automatic transmission, the front seat becomes a bench. Most carmakers, we are afraid, would have made this car look "friendly" or retro and cute. The French made it futuristic, unapologetic, and incredibly cool, and for that reason we want to see it Stateside as soon as possible. 4. Dacia Duster Dacia started out assembling Renaults when Romania was an especially dark corner of the Eastern Bloc. Now it is Renault's low-cost brand, and the entry-level prices are incomparably low. Owning a Dacia tells the world that you don't care the slightest bit about status and social hierarchy. Which, especially if you are way up on the social ladder, can be a rather sophisticated (okay, maybe a little arrogant) statement in itself. The Duster is Dacia's blocky off-roader and we like it best when kept simple, complete steel wheels and unpainted bumpers. 5. Mercedes-Benz C 180d An old Mercedes diesel is kind of a "hippie" statement. Remember the oil-burning Benz sedans of the 1960s and 1970s? Yes, they were slow as molasses, but their drivers had opted out of the race to dominate the passing lane, in favor of a far mellower Mercedes experience. Today's U.S.-market diesels from Stuttgart are a different breed: Fast, efficient, a sportier alternative to a gas-powered hybrid. European buyers, on the other hand, can slow things down in the C 180 d. It's powered by a

Renault-sourced 113-horsepower diesel and fitted with a surprisingly slick manual transmission, or Benz's own optional slushbox. A zero-to-sixty time of 11.1 seconds provides ample time for contemplation while everyone else scrambles to get ahead. 6. Opel Insignia Sports Tourer OPC The Opel Insignia is the sister model of the Buick Regal, and it is a truly great car. Even a cursory study of the German price list reveals that the model portfolio in the U.S. is sadly compromised, however. We'd spec the ultimate Regal/Insignia with the thirsty but silky-smooth 320-horsepower V-6, opt for the manual transmission and the governor override, and of course go for the station wagon body. We'd call this 165-mph missile the Buick Regal Grand National Estate. And yes, believe it or not, we think people would buy it. 7. Peugeot 308 GTi The French have always built some of the most interesting "hot hatches," and we are happy to report that Peugeot is on a mission to rediscover its soul. Of course, this comes after a number of years wasting too much time and resources bland models that aimed to pleased everybody – and inspired nobody. The 308 GTi makes a stunning 268-horsepower and comes with a six-speed manual and locking diff. The optional two-tone paint scheme makes it look like a concept car that just rolled from an auto show onto a public road. Yes, a GTI is very nice. We'll just take the one from France. 8. Renault Espace Written off as seriously uncool by all but a few Asian brands (and even those efforts aren't particularly interesting), the minivan seems to have fallen by the wayside. Not so at Renault! The company that virtually invented the minivan in the early 1980s with the hugely popular Espace has now re-imagined it as an ultra-futuristic crossover. We're here to tell you the top-level trim is as sumptuous as it is elegant. Yes, there really is a minivan you'd want to be seen in. It's called the Renault Espace Initiale Paris – and it's as practical as it is pretty. 9. Skoda Superb For a VW Group car that annoys the heck out of VW executives, behold the (pretentiously named) Skoda Superb. Built atop the Group's modern MQB platform, it is a cheaper and far better-looking variation of their own European-market Passat, which wears way too much chrome - and looks like it's been hit with a large shovel. European markets agree, Skoda's top-level entry is turning into a smashing success thanks to elegant design, refined dynamics, and smart pricing. 10. Volkswagen Up! Even smaller than the Polo, this entry-level Volkswagen is striking in its simplicity and Bauhaus-inspired product design philosophy. It was launched with a 60- and 75-horsepower 3-cylinder engine, but the Up! just gained a 105-horsepower turbocharged motor in the Brazilian market. We think the little Up! captures the pure essence of the brand better than any other VW. If you appreciate product design and contemporary architecture, you would love this minicar. It's also easy to park and cheap to buy. We give that two thumbs...Up!

View article...

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE Member Connection
Sent: Thur 8/27/2015 9:57:47 AM
Subject: Open Forum Digest for Wednesday August 26, 2015

[redacted]

Open Forum

Post New Message Online Post New Message via Email

Aug 26, 2015

started 19 hours ago, Jerry Alcone (0 replies)

plastic design -

1Why do plastic part designers design stuff with... Jerry Alcone

started 22 hours ago, William Lin (1 reply)

Insurance company's device for "driving skill" assessment -

2Some time ago there was a mention in the

SAE... William Lin

3 Talk about big brother, I have seen the ads for... Jerry Alcone

started yesterday, Yuzhen Yang (7 replies)

Does anyone has a program of any type to convert accelerometer measurement to strain?

4 If possible I would always use strain... Philip Stunell

5 Thanks Phillip, I am not a structures guy and I... Jerry Alcone

6 Yuzhen, On big equipment, the name of the... Rick Kerner

7 I wold suggest an approach where you both meet... Bernard Challen

8 Great idea, stain gauges installation in the... Jerry Alcone

started 2 days ago, Jerry Alcone (14 replies)

Help! my 2002 S10 eats Right Rear turn

signal bulbs

9 Thanks William, no trailer harness, no moisture... Jerry Alcone

10 Often failures like this are caused by either... Donald Johnson

11 Mr. Alcone, It seems like the bulb-to... Troy Matthews

12 Thanks Troy I will investigate per your... Jerry Alcone

started 2 days ago, Jerry Alcone (2 replies)

Your favorite story about non-technical types over ruling engineering decisions for cost or schedule reasons.

13 would say the collapse of the catwalk at the... Daniel Rauchholz

started 2 months ago, Jerry Alcone (57 replies)

Electronic Content in Modern Cars

14 Precisely, the OEM's are stuck in what I call... Jerry Alcone

15 Wade is spot on. Jerry, you can't check the box... Robert Gruszczynski

16 6 seems to me that people sometimes think that... Dennis Roitt

17 Wouldn't it be neat if they spent the $ and time... Jerry Alcone

started 2 months ago, Lindsay Silver (73 replies)

Introduce yourself here.

18 Hello everybody. I'm Claudio Schellino R&D... Claudio Schellino

19 Hi, I'm Lawrence Driscoll. An SAE member... Lawrence Driscoll

20 Hello, Everyone I'm a Product Manager for... Adam Burnett

top next

1.

Aug 26, 2015 9:30 AM

Jerry Alcone

Why do plastic part designers design stuff with sharp internal corners that are loaded with "opening moments"? This drives me crazy. I bet the mold makers also love it. Nearly every plastic part failure I have experienced was at an internal sharp corner. Come on, it is really hard (expensive) to get a sharp corner. Give me a break (pun)

Jerry Alcone
Retired
Albuquerque NM

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2. Insurance company's device for "driving skill" assessment

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-

William Lin

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3. Re: Insurance company's device for "driving skill" assessment

Reply All Online | Reply All Email

-

Jerry Alcone

'

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4. Re: Does anyone has a program of any type to convert accelerometer measurement to strain?

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-

Philip Stunell

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5. Re: Does anyone has a program of any type to convert accelerometer measurement to strain?

Reply All Online | Reply All Email

-

Jerry Alcone

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6. Re: Does anyone has a program of any type to convert accelerometer measurement to strain?

Aug 26, 2015 9:34 AM
Rick Kerner

Yuzhen,

On big equipment, the name of the game is durability. In order to gauge durability, you need field data. This field data needs to contain strain measurements for two reasons; one is for FE model correlation, the other is for fatigue calculation. Fatigue predictions give you the info necessary to make critical path decisions and correct/move forward as needed. I bet team green has some mature methods

to predict fatigue and it requires field data or test track data to run on.

If the combine is in a MBD model, you could use flex bodies to evaluate, albeit conservatively, the component under study. My experience with MBD on big equipment is that it is very, very conservative for force input and flex body "state" predictions.

I recommend using the FE guy to identify strain gauge locations that the test tech/engineer can apply gauges and properly evaluate the component/assembly you are working on.

On your next query, I do suggest adding more fidelity to the "situation" in order to receive responses that can be more relevant and directly useful. (Philip's

response was excellent in a broad sense, Jerry's was more direct the second time around)

Rick Kerner Principal Engineer
KTO Solutions LLC
Sunburg, MN
rick.kerner@ktosolutions,com

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7. Re: Does anyone has a program of any type to convert accelerometer measurement to strain?

Aug 26, 2015 12:16 PM

Bernard Challen

I wold suggest an approach where you both meet in the middle of the problem - get the FEA team to provide output in terms of vibration velocity (which is usually relatively easy for them to do) and use your vibration analyser to integrate the accelerometer output once to get the vibration velocities. In this way you can both be speaking the same 'language' and both have a shared analysis step to make sure than brains are engaged all round . . .

Good luck - and take care with the measurement integration time constant settings, but it really does work!

Bernard Challen
Prof
Shoreham Services
SHOREHAM-BY-SEA

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8. Re: Does anyone has a program of any type to convert accelerometer measurement to strain?

Aug 26, 2015 12:35 PM

Jerry Alcone

Great idea, stain gauges installation in the field is big pain.

Jerry Alcone
Retired
Albuquerque NM

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9. Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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Jerry Alcone

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10 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

Reply All Online | Reply All Email

-

Donald Johnson

I

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top previous next

11Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

Reply All Online | Reply All Email

Troy Matthews

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12Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

Reply All Online | Reply All Email

-

Jerry Alcone

Email Sender View Thread Recommend Forward Flag as Inappropriate

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13Re: Your favorite story about non-technical types over ruling engineering decisions for cost or schedule reasons.

Reply All Online | Reply All Email

Daniel Rauchholz

I would say the collapse of the catwalk at the Hyatt in Kansas City in 1981.
Although, to be fair, that may have been engineers who didn't know what they were doing over-ruling other engineers who did know what they were doing because they wanted to make the structure easier to assemble.

Dan Rauchholz
NVH Manager
UGN Inc
Farmington Hills MI

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14 Re: Electronic Content in Modern Cars

Reply All Online | Reply All Email

-

Jerry Alcone

'

Email Sender View Thread Recommend Forward Flag as Inappropriate

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15 Re: Electronic Content in Modern Cars

Aug 26, 2015 8:01 AM

Robert Gruszczynski

Wade is spot on. Jerry, you can't check the box that says "no EDR," you have to seek out a car without. As I mentioned earlier, the owner's manual is a good place to start, since the OEMs are required to tell you the EDR capabilities of the vehicle there. George Orwell anyone?

Robert Gruszczynski
OBD Communication Expert
Volkswagen of America
Willis MI

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16 Re: Electronic Content in Modern Cars

Reply All Online | Reply All Email

-

Dennis Roitt

Email Sender View Thread Recommend Forward Flag as Inappropriate

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17 Re: Electronic Content in Modern Cars

Reply All Online | Reply All Email

Jerry Alcone

Wouldn't it be neat if they spent the $ and time on making the vehicle reliable and maintainable and let me worry about turning the fan up or down.

Next will be an annal probe that feeds body temp to the computer. I am sure I will like the convenience of this value added feature and appreciate its reliability. Sorry I sometimes get carried away.

Jerry Alcone
Retired
Albuquerque NM

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18 Re: Introduce yourself here.

Reply All Online | Reply All Email

-

Claudio Schellino

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19 Re: Introduce yourself here.

Reply All Online | Reply All Email

-

Lawrence Driscoll

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top previous

20Re: Introduce yourself here.

Reply All Online | Reply All Email

-

Adam Burnett

I

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Inappropriate

My Subscriptions. To unsubscribe from this community discussion, go to Unsubscribe.

From: Goodwin, Ed
Required Attendees: Jennifer Youngberg; Belser, Evan; Tyler Amon; Lynn, Jennifer; Jay-M Green; Adair, Scot
Optional Attendees: Orehowsky, Gregory; Kaul, Meetu; Werner, Jacqueline
Location: Conference Call (see call-in information, below)
Importance: Normal
Subject: VW Discussion
Start Date/Time: Fri 8/28/2015 5:30:00 PM
End Date/Time: Fri 8/28/2015 6:00:00 PM

Call-in Number - 866-299-3188

Non-Responsive

Looking at everyone's calendars, this seems to be the best available time-slot. Please let me know if this will not work for your schedule - thanks!

Ed

To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Belser, Evan
Sent: Thur 8/27/2015 2:24:23 PM
Subject: FW: Conference Call - VW Diesel Update and Next Steps
VW Diesel Summary 24 August 2015.docx
ATT00001.htm

From: Belser, Evan
Sent: Tuesday, August 25, 2015 11:17 AM
To: Shinkman, Susan
Cc: Brooks, Phillip; Werner, Jacqueline; Chapman, Apple
Subject: Fwd: Conference Call - VW Diesel Update and Next Steps

Susan, per your request, I'm forwarding the paper OTAQ prepared regarding VW; as below, this is what I share with DOJ yesterday.

Thanks,

Evan

Begin forwarded message:

From: "Belser, Evan" <Belser.Evan@epa.gov>
Date: August 24, 2015 at 4:21:50 PM EDT
To: Leslie Allen <Leslie.Allen@usdoj.gov>, "Dworkin, Karen (ENRD)" <Karen.Dworkin@usdoj.gov>
Cc: "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>
Subject: FW: Conference Call - VW Diesel Update and Next Steps

From: Bunker, Byron
Sent: Monday, August 24, 2015 8:51 AM
To: Grundler, Christopher; Brooks, Phillip; Belser, Evan; Cook, Leila; Wehrly, Linc; Manners, Mary
Cc: Hengst, Benjamin
Subject: Conference Call - VW Diesel Update and Next Steps

Attached is a one-pager that summarizes most of what we know right now. I would like to use this at 10 to check for any inconsistencies (does anyone understand something differently) and then to help us identify our next steps.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Werner, Jacqueline
Required Attendees: Evan Belser; Meetu Kaul; Orehowsky, Gregory
Location: DCRoomARS1142/DC-ARIEL-RIOS-OECA-OCE
Importance: Normal
Subject: VW
Start Date/Time: Thur 8/27/2015 7:00:00 PM
End Date/Time: Thur 8/27/2015 8:00:00 PM

From: Werner, Jacqueline
Required Attendees: Evan Belser; Meetu Kaul; Orehowsky, Gregory
Location: DCRoomARS1142/DC-ARIEL-RIOS-OECA-OCE
Importance: Normal
Subject: VW
Start Date/Time: Thur 8/27/2015 7:00:00 PM
End Date/Time: Thur 8/27/2015 8:00:00 PM

From: Kaul, Meetu
Location: Conference Call (see call-in information, below)
Importance: Normal
Subject: Accepted: VW Discussion
Start Date/Time: Fri 8/28/2015 5:30:00 PM
End Date/Time: Fri 8/28/2015 6:00:00 PM

From: Kaul, Meetu
Location: DCRoomARS1142/DC-ARIEL-RIOS-OECA-OCE
Importance: Normal
Subject: Accepted: VW
Start Date/Time: Thur 8/27/2015 7:00:00 PM
End Date/Time: Thur 8/27/2015 8:00:00 PM

To: Good, David[good.david@epa.gov]
Cc: Ex. 7 @vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]; Ex. 7 Ex. 7 @vw.com]
From: Ex. 7 (EEO)
Sent: Thur 8/27/2015 5:27:04 PM
Subject: RE: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Hi Dave;

Ex. 4 - CBI

Thanks,

Ex. 7

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, August 26, 2015 2:49 PM
To: Ex. 7 @vw.com>
Cc: Ex. 7 @vw.com>; Snyder, Jim <Snyder.Jim@epa.gov>; Ex. 7 @vw.com>
Subject: RE: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Ex. 7

Attached are the 2016 FE Guide data (where Index 100 uses the 2017 derived 5-cycle equation) and my edits to your 2016 placeholder file (FYI).

Ex. 4 - CBI

Let me know if you see any problems with my edits to your Placeholders.

Dave

From: Ex. 7 @vw.com]
Sent: Wednesday, August 26, 2015 7:11 AM
To: Good, David
Cc: Ex. 7
Subject: RE: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Hi Dave;

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

I have a place holder for the 2016 Audi A3 e-tron and A3 e-tron Ultra. Ex. 4 - CBI

Ex. 4 - CBI I have attached the Excel spreadsheet with that place holder information. Please let me know if this spreadsheet will work for your purpose.

If you have any questions, please let me know.

Best regards,

Ex. 7

Ex. 7

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone:

Fax:

mailto:

Ex. 7

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, August 21, 2015 10:47 AM
To: Ex. 7 @vw.com>
Cc: Ex. 7 @vw.com>; Snyder, Jim <Snyder.Jim@epa.gov>
Subject: re: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Ex. 7

re: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Attached are the data in Verify as of August 20, 2015 6AM. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov or included in the 2016 Printed Guide. Note that there are separate tabs for EV, PHEV, and fuel cell vehicles (if applicable). Please make any needed corrections to Verify when you get a chance. Please enter new data in Verify for any missing labels.

-

Printed Guide – For the 2016 Printed Guide, I will send all error-free data in Verify to DOE on September 2, 2015, regardless of release date. The data will not be released outside of EPA & DOE offices until the week of November 16, 2015, when 2016 Printed Guides are scheduled to be mailed to dealerships, libraries and credit unions, ref. EPA guidance letter CD-15-16, July 20, 2015. Please email me if there are data in Verify which you do not want included in the 2016 Printed Guide.

Next Web Update - The next normal posting of 2015 & 2016 FE Label data will be on August 25, 2015

(on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later). Again on September 2, 2015, I'll send the error-free data in Verify (which is releasable) to DOE to update www.fueleconomy.gov, business-as-usual.

Using the 2017 Derived 5-Cycle Equation for 2016MY Vehicles: If you are voluntarily using the 2017 derived 5-cycle equations for any 2016 model year vehicles, please send me the 2016 Index number(s) of the affected vehicles so I can build them into the macro. See EPA Guidance Letter CD-15-15, June 22, 2015 for additional information about the revised derived 5-cycle equation.

Placeholders for the 2016 Printed Guide are due to EPA on Aug 20, 2015: If you haven't already done so, please send me an Excel spreadsheet with any fuel cell vehicles, EVs, HEVs, PHEVs, FFVs and any other alternative fuel vehicles which won't be labeled in Verify by September 1, 2015. [Please don't include placeholder information for vehicles which are already in EPA's Verify database (or will be in Verify by September 1, 2015).] See Enclosure 2, Section 3 of EPA Guidance letter CD-15-16 for additional information about placeholders.

Reminders:

- Please double check the attached data in Verify for accuracy, missing labels, etc.
- September 1, 2015 is the last day to make changes for the 2016 Printed Guide.
- If you enter new label data into Verify before September 2, 2015, please double check it carefully for accuracy.

Please send me a short email when your 2016 FE Label data in Verify are "good to go."

Please send me your placeholder spreadsheet as soon as possible.

Thanks

Ex. 7

To: Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Ex. 7
Ex. 7 Bill MacLeod (bmacleod@hyundai-dc.com)[bmacleod@hyundai-dc.com]; Bob Devine (robert.w.devine@baesystems.com)[robert.w.devine@baesystems.com]; Bob Oesterreich (bob.oesterreich@airliquide.com)[bob.oesterreich@airliquide.com]; Brendan Shaffer (bps@apep.uci.edu)[bps@apep.uci.edu]; Brian Goldstein (brian@einow.org)[brian@einow.org];
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catherine.kim@daimler.com[catherine.kim@daimler.com]; Grundler, Christopher[grundler.christopher@epa.gov]; Chris Moen (cmoen@sandia.gov)[cmoen@sandia.gov]; David Blekhman Ph. D. (blekhman@calstatela.edu)[blekhman@calstatela.edu]; Dwight Zuck (Dwight.zuck@airliquide.com)[Dwight.zuck@airliquide.com]; 'eileen.brown@linde.com'[eileen.brown@linde.com]; Eloi Taha Ph. D. (eloi.taha@nissan-usa.com)[eloi.taha@nissan-usa.com]; Donez, Francisco[Donez.Francisco@epa.gov]; Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; Geoffrey Budd (gb@itm-power.com)[gb@itm-power.com]; Ex. 7 Geri Yoza (Geri_yoza@toyota.com)[Geri_yoza@toyota.com]; Guevara, Rafael[RGuevara2@semprautilities.com]; Jacquelyn Birdsall (jacquelyn.birdsall@tema.toyota.com)[jacquelyn.birdsall@tema.toyota.com]; Jamie Hall (jamie.hall@gm.com)[jamie.hall@gm.com]; Jared Farnsworth (jared.farnsworth@tema.toyota.com)[jared.farnsworth@tema.toyota.com]; Jason Marcinkoski (jason.marcinkoski@ee.doe.gov)[jason.marcinkoski@ee.doe.gov]; Jay Keller Ph. D. (Jay.Keller@ZCES-Inc.com)[Jay.Keller@ZCES-Inc.com]; Jean Baronas (Jean.Baronas@energy.ca.gov)[Jean.Baronas@energy.ca.gov]; Jeff Grant (jeff.grant@ballard.com)[jeff.grant@ballard.com]; Jeff Reed (jgreed@semprautilities.com)[jgreed@semprautilities.com]; Jerome Gregeois (jgregeois@hatci.com)[jgregeois@hatci.com]; Joan Ogden (jmogden@ucdavis.edu)[jmogden@ucdavis.edu]; John Shears (shears@ceert.org)[shears@ceert.org]; Joseph Pratt (jwpratt@sandia.gov)[jwpratt@sandia.gov]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Kate Zeng (KZeng@semprautilities.com)[KZeng@semprautilities.com]; Keith Wipke (keith.wipke@nrel.gov)[keith.wipke@nrel.gov]; Kevin Schnepp (kevin.schnepp@cdfa.ca.gov)[kevin.schnepp@cdfa.ca.gov];
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Cc: Ben Xiong[bxiong@cafcp.org]
From: Nico Bouwkamp
Sent: Thur 8/27/2015 7:07:38 PM
Subject: September 9-10 CaFCP WG meeting agenda
20150624_25 CaFCP WG Action Items Summary_WithUpdates.docx

Working Group participants,

The agenda for the in-person Working Group meeting on September 9-10 at Cal State LA in Los Angeles is available at: http://cafcpmembers.org/membersonly/wg_meeting_20150909-10 (for Member Resources access issues, contact Ben Xiong @ bxiong@cafcp.org).

In preparation for the September WG meeting, please review the attached June WG meeting assignments/action items and decisions – you may be responsible for one of the items and asked to provide a status report.

We are looking forward to your active participation.

Best regards,

Nico Bouwkamp | CaFCP Technology Analyst | BKI Sr. Program Consultant

916-375-8050 (o) | 707-688-8728 (m) | nbouwkamp@cafcp.org

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Thur 8/27/2015 10:16:47 PM
Subject: Re: 2016 FE Guide - Errors in Verify as of 4PM on August 27, 2015
VW_Group_2016 FE Guide-all rel dates-no-sales-8-27-2015.xlsx

Richard,

Re: 2016 FE Guide - Errors in Verify as of 4PM on August 27, 2015

I did another query of the data in Verify as of 4PM today---to help manufacturers correct errors on any new entries.

Attached are the data in Verify as of 6AM on August 27, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on September 2, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later). This is the same day which I will send the data in Verify to DOE for the 2016 Printed Guide.

Please make any needed corrections to Verify when you get a chance.

Using the 2017 Derived 5-Cycle Equation for 2016MY Vehicles: If you are voluntarily using the 2017 derived 5-cycle equations for any 2016 model year vehicles, please send me the 2016 Index number(s) of the affected vehicles so I can build them into the macro.

Placeholders for the 2016 Printed Guide are due to EPA on Aug 20, 2015: If you haven't already done so, please send me an Excel spreadsheet with any fuel cell vehicles, EVs, HEVs, PHEVs, FFVs and any other alternative fuel vehicles which won't be labeled in Verify by September 1, 2015. [Please don't include placeholder information for vehicles which are already in EPA's Verify database (or will be in Verify by September 1, 2015.] See Enclosure 2, Section 3 of EPA Guidance letter CD-15-16 for additional information.

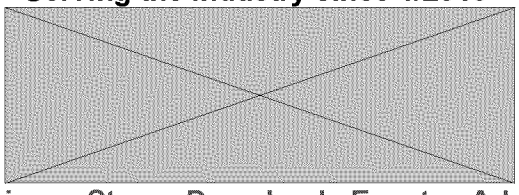
Thanks

Dave

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Shmuel De Leon Energy
Sent: Fri 8/28/2015 3:53:59 AM
Subject: Shmuel De-Leon Energy Storage Newsletter - 30/8/2015 - No. 295

Shmuel De-Leon Batteries, Super-capacitors, Fuel cells & EV`s Weekly Newsletter

August 30th, 2015, No. 295
Sent to more than 125,000 industry members
Serving the industry since 1/2010



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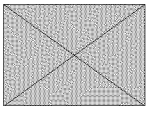
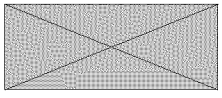
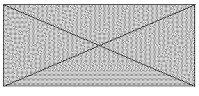
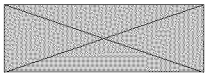
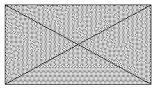
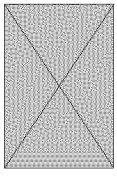







Battery News

Lux suggests how LG Chem might overtake EV battery leader Panasonic

LG Chem secures EV battery deal

Navigant expects global market for automotive Li-ion batteries to hit $30.6 billion in 2024; almost 4x 2015 market

Atomic Layer Deposition process for highly conductive LiPON for solid-state batteries

University of Washington team develops new robust approach to solving battery models

NASA selects Amprius and U Maryland for two new battery projects; silicon anode and Li-S

ETH Zurich team develops new low-temp synthesis route for high-conductivity garnet structures for solid-state Li-ion batteries

EU launches $7.6M ALISE to develop Li-sulfur batteries for plug-ins; targeting stable 500 Wh/kg cell by 2019

3D porous germanium-carbon composite particles as ultra-high rate anode for Li-ion batteries

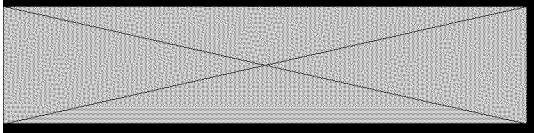
Sanctions-free Iran looks to Japan carmakers for eco-friendly vehicles

National Electric Vehicle Sweden AB (NEVS) and Dongfeng Motor Corporation enter strategic cooperation, focused on new energy vehicles

Nissan introduces hybrid version of Murano to China first

Leviton Unveils Evr-Green 320 Level 2 Charging Station

UK to Have Special Wireless EV Charging Lanes



www.arbin.com
antony.p@arbin.com

Toshiba completes European lithium BESS tests

GE signs its largest battery energy storage deal to date; 30MW Li-ion system in California

Finland Utility Orders Battery Energy Storage System

Alevo making battery components in Concord as it nears production line completion

ZBB Energy Changes Name to EnSync, Inc.

Redflows High Energy Density Flow Battery with Small Footprint Enters the European Energy Storage Market

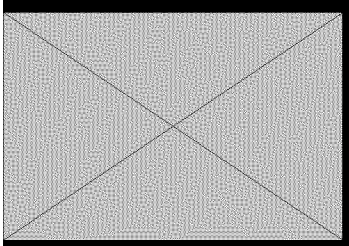
ViZn Energy Systems' 2MW Zinc-Iron Redox Flow Battery System Selected by Hecate Energy for Ontario IESO Project

Quantum leap in flywheel technology

Shmuel De-Leon Energy is looking for partners in Finland, Sweden, Canada, Japan, Korea, China to host and partner on its

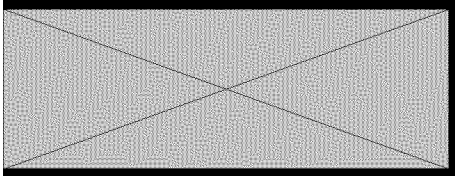
The Batteries, Fuel Cells, Super Capacitors & EV Seminar
Seminars Web Site

Schedule	Location	Partner	Program	Registration
21-22/9/2015	Somerset, NJ, USA			



18th continuation of annual meetings "Advanced Batteries, Accumulators and Fuel Cells" will be held in City of Brno in August 30th - September 2nd 2015

at the Brno University of Technology. This year, its main interest should be electrochemistry of lithium cells, supercapacitors and materials for them, including Ionic liquids, corrosion of materials, application of nanomaterials, alternative energy - photovoltaic systems.



BATTERY OSAKA, September 3nd-4th, 2015, is a specialised exhibition newly launched in 2014 for manufacturing and R&D of rechargeable batteries. All kinds of materials, manufacturing technologies, inspection/analysis equipment related to rechargeable batteries will be gathering. For exhibiting and visiting inquiries: bj-o@reedexpo.co.jp

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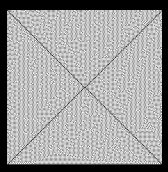
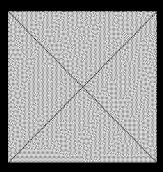


4th International Secondary Lead Conference, 7-8 September 2015, Centara Grand @ CentralWorld and Bangkok Convention Centre.
This biennial Conference is Asia's leading exchange for secondary lead producers, suppliers, markers and lead-acid battery recyclers. The Conference will provide a remarkable opportunity for all segments of the industry to meet and discuss the many topics affecting the industry. Emphasis will also be placed on the market conditions and what role secondary plays in the overall lead market. wwwsecondaryleadconference.com



16th Asian Battery Conference and Exhibition, 8 - 11 September 2015, Centara Grand @ CentralWorld and Bangkok Convention Centre. 16ABC will see the largest and most important assembly of battery industry experts gather in Bangkok for what is the premier lead battery industry event in Asia. Participate in a sparked-up show with an interactive and lively exhibition, a program that showcases presentations from global experts in battery technology, science and business and ramped-up social events. www.asianbatteryconference.com

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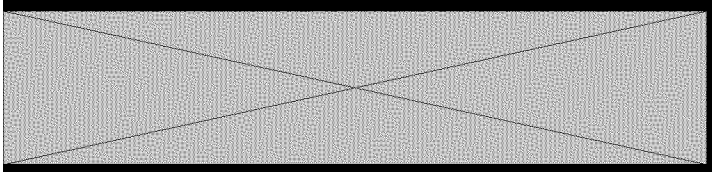
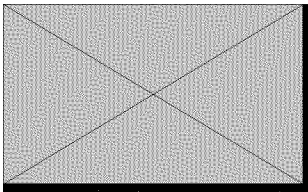
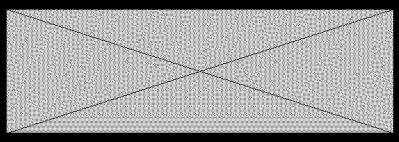
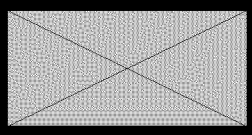
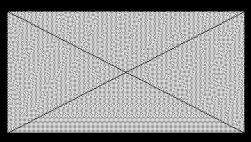
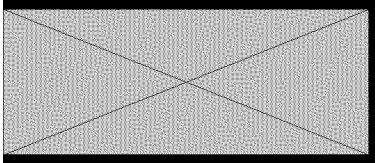


Taking place September 15-17, 2015, in Novi, Detroit, Michigan, The Battery Show 2015 is the premier showcase of the latest advanced battery technology. The exhibition hall offers a platform to launch new products, make new contacts and maintain existing relationships. With more qualified buyers and decision makers than any other event in North America, The Battery Show 2015 is the key to unlocking your future business opportunities.

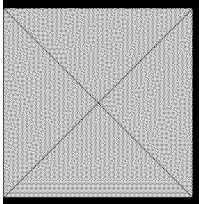


Join the only technical conference where the automotive and renewable industries come together to ensure business growth. With the growth of the electric vehicles' market and the shift to cleaner energy, batteries have become the common denominator for the automotive and renewable industry. Take this unique opportunity to meet experts from around the world. Visit the website for more information

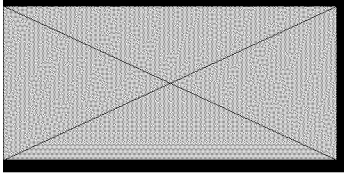






The 2nd edition of the World Electric & Hybrid Boat Summit will take place from 30th September till 2nd October 2015 in Amsterdam, followed by a study tour in Friesland. PlugBoat aims at providing a premier & high quality global platform to foster exchange of views and development of synergies between players in the field of electric & hybrid boats for sport and inland water transportation. Info

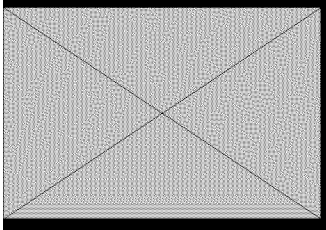


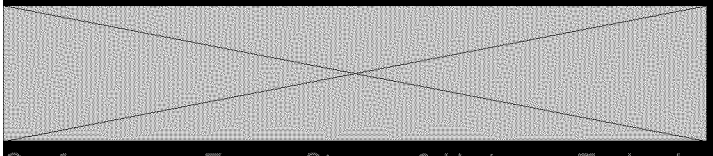
"Battery Shanghai" is organized by China Info



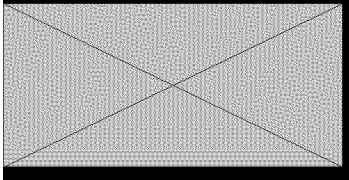
Batteries 2015 is taking place 7-9 October 2015, Nice France.

Christophe Pillot will be also handling his 2nd edition of his tutorial on "The Rechargeable Battery Market: value chain and main trends 2014 - 2025" on October 6th 2015. Batteries 2015 will include 3 days of technical sessions with 70 high level speakers, poster sessions, networking cocktail & dinner and a 2000 m² exhibit area. Contact : Sonia Jouneau - Tel : +33 1 41 34 21 75 - Email : sjouneau@lepublicsysteme.fr

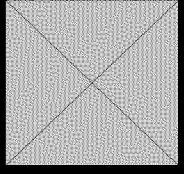




http://hydrogen.sk.ru/en/ International Conference on Energy Storage & Hydrogen Technology - 2015, 14 - 15 October, 2015, Moscow, Russia. Held over two days at Skolkovo, Conference incorporates lively debates, interactive startup exhibition, and startup pitch sessions. Event aims to develop cooperation between wide range of participants including international industrial companies, venture capital firms, research organizations, developers and manufacturers of energy storage systems and independent teams of inventors. Number of innovative companies will present innovative products and technologies in the field of energy storage and hydrogen technology.

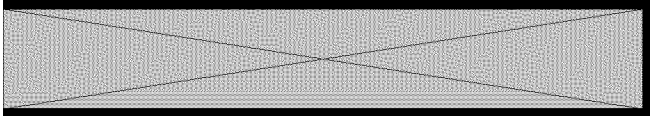


www.interbattery.or.kr

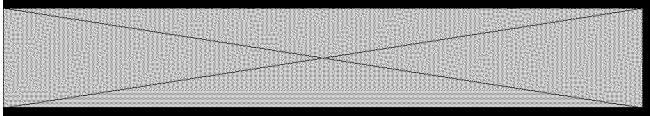


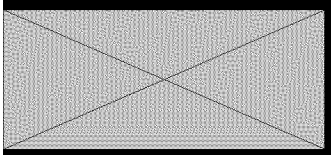
This year, the World Mobility Conference takes place alongside the eCarTec Munich 2015 and MATERIALICA 2015 trade fairs from October 20 - 22, 2015 (at Messe München). On 22 October 2015 from 9.30 am - 05:00 pm the conference agenda will include a

session about Electric Vehicle Batteries with 12 leading speakers on the topics of electric vehicles and electric vehicle batteries. It will be moderated by Mr. Shmuel De Leon from Shmuel De Leon Energy. Further information available at

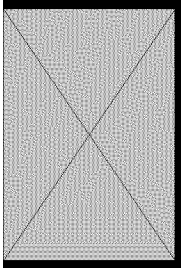


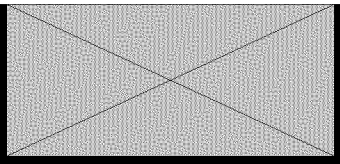
Part 1 of



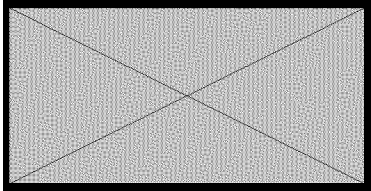


Fuel Cell Seminar and Energy Exposition, November 16-19, 2015



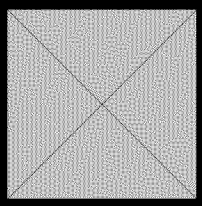


ees™ is the international exhibition series for batteries, energy storage systems and innovative production. ees Europe is Europe's largest energy storage event taking place in Munich in conjunction with Intersolar Europe on June 10-12, the world's leading exhibition for the solar industry. Furthermore ees™ North America and ees India are highlighted as Special Exhibitions at the Intersolar events in San Francisco on July 14-16 and Mumbai on November 18-20 - the major platforms for energy storage technologies, reshaping the energy sector.

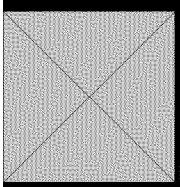


The 4th edition of the European Electric & Hybrid Vehicle Congress will take place from 1st to 4th December 2015 in Brussels. With over 200 presentations to be made, EEVC 2014 strengthens its position as global platform to foster exchange of views between the researchers, the industry, the authorities, the end users and the NGO's in the field of eMobility.

Info: www.eevc.eu ,



Energy Storage India (ESI) is the leading conference and expo addressing the need for energy storage and microgrid solutions in India. The 3rd International Conference & Exhibition, which is scheduled from December 08 - 09, 2015 along with a Pre-Conference workshop on December 07, 2015 at India Habitat Centre, New Delhi. The 2-day conference program would be concentrating on interactive markets with the topic "New Era for India's Energy Infrastructure through Energy Storage and Microgrids". Url



European Fuel Cell Technology & Applications Piero Lunghi Conference - EFC15 10-13 December 2015, Naples (Italy) This breakthrough conference offers three full days where the following topics are focused: Materials, Modeling, Lab Tests, System Design, Fuels and decarbonising society, FC Applications, FC operated in reversed mode, Marketing and Policy pathways to full commercialization of FC, Cross cutting issues, New ideas and bad ideas in FC, Safety, Regulations codes & standards in FC, Microbial Fuel Cells, Dissemination of European projects on Fuel Cell and Hydrogen. www.europeanfuelcell.it

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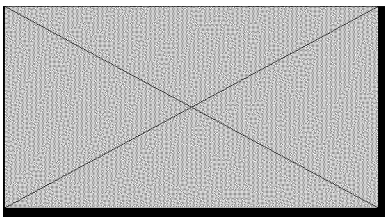
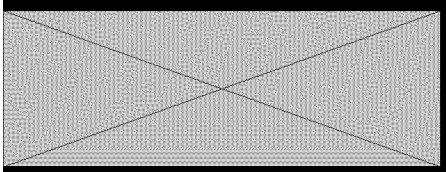


The 2016 NAATBatt Annual Meeting & Conference will be held on February 29 - March 3, 2016, at the Hyatt Regency Indian Wells resort. The meeting includes the Advanced Battery Golf & Tennis Tournament and covers developments in the business of electrochemical energy storage across applications and business sectors. Updates on market and technology trends in vehicle batteries, ESS and thin film batteries will be presented. Contact: James Greenberger (512) 588 0488 x1 jgreenberger@naatbatt.org
http://naatbatt.org/naatbatt-annual-conference



Shmuel De-Leon Energy, Ltd. Mazal-Arie 10, Hod-Hasharon, 45309 Israel
http://www.sdle.co.il http://www.batteriesdatabase.com
shmuel@sdle.co.il, Tel/Fax: 972-77-5010792
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Update Profile/Email Address | Rapid removal with SafeUnsubscribe™ | About our service provider.

Shmuel De Leon Energy | Mazal-Arie 10 | Hod-Hasharon | 45309 | Israel

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Fri 8/28/2015 10:13:13 AM
Subject: RE: 2016 FE Guide - Errors in Verify as of 4PM on August 27, 2015

Thanks Dave;

Ex. 4 - CBI

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, August 27, 2015 6:17 PM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Cc: Snyder, Jim <Snyder.Jim@epa.gov>
Subject: Re: 2016 FE Guide - Errors in Verify as of 4PM on August 27, 2015

Richard,

Re: 2016 FE Guide - Errors in Verify as of 4PM on August 27, 2015

I did another query of the data in Verify as of 4PM today---to help manufacturers correct errors on any new entries.

Attached are the data in Verify as of 6AM on August 27, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on September 2, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later). This is the same day which I will send the data in Verify to DOE for the 2016 Printed Guide.

Please make any needed corrections to Verify when you get a chance.

Using the 2017 Derived 5-Cycle Equation for 2016MY Vehicles: If you are voluntarily using the 2017 derived 5-cycle equations for any 2016 model year vehicles, please send me the 2016 Index number(s) of the affected vehicles so I can build them into the macro.

Placeholders for the 2016 Printed Guide are due to EPA on Aug 20, 2015: If you haven't already done so, please send me an Excel spreadsheet with any fuel cell vehicles, EVs, HEVs, PHEVs, FFVs and any other alternative fuel vehicles which won't be labeled in Verify by September 1, 2015. [Please don't include placeholder information for vehicles which are already in EPA's Verify database (or will be in Verify by September 1, 2015.] See Enclosure 2, Section 3 of EPA Guidance letter CD-15-16 for additional information.

Thanks

Dave

To: Wright, DavidA[Wright.DavidA@epa.gov]; Glodich, Jeffrey (J.M.)[jglodich@ford.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ball, Joel
Sent: Fri 8/28/2015 1:48:03 PM
Subject: RE: Upcoming SAE LDVP Committee Meetings

Both days are okay for me too.

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4238
ball.joel@epa.gov

From: Wright, DavidA
Sent: Wednesday, August 26, 2015 6:05 PM
To: Glodich, Jeffrey (J.M.)
Cc: Ball, Joel; Snyder, Jim
Subject: RE: Upcoming SAE LDVP Committee Meetings

Jeff,

Both days will work for me.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

From: Glodich, Jeffrey (J.M.) [mailto:jglodich@ford.com]
Sent: Wednesday, August 26, 2015 12:31 PM
To: 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; "Beth Perry <eperry@sae.org>" <BethPerry; 'Bob Maxwell'; brian.mace@horiba.com; Buller, Patrick; Paulina, Carl; Chris Nevers; Christopher J Twarog ; david.woods@chrysler.com; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; Glodich, Jeffrey (J.M.); guanghui.cai@gm.com; 'Jeff Foor'; Jenny.Sigelko@vw.com; JNIKEUS@volvocars.com; 'Keith Thompson'; kyle.bedsole@gm.com; 'Mahmoud Yassine'; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z. Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)'; sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com; Suanne.Thomas@vw.com; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; Vineet Mehta; William Beggs <william.beggs@gm.com>; Ott, William; william.meschievitz@tema.toyota.com; Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.)
Subject: Upcoming SAE LDVP Committee Meetings

All,

Please send me your input on the following proposed dates for the next J1634 and J2263 meetings:

SAE J1634 Sept 17th

SAE J2263 Sept 24th

Thanks,

Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Fri 8/28/2015 5:11:15 PM
Subject: VW Group Decision Information

Hello Jim,

We have submitted the exhaust tests and decision information for the new generation Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Belser, Evan
Sent: Fri 8/28/2015 9:10:16 PM
Subject: RE: VW - briefing and enforcement response plan

Thanks Meetu!

From: Kaul, Meetu
Sent: Friday, August 28, 2015 5:05 PM
To: Belser, Evan; Werner, Jacqueline
Subject: RE: VW - briefing and enforcement response plan

Here is a shortened up version.

Talk to you both on Monday. Have a good weekend.

-Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Belser, Evan
Sent: Friday, August 28, 2015 4:35 PM

To: Kaul, Meetu; Werner, Jacqueline
Subject: RE: VW - briefing and enforcement response plan

I think one briefing. Susan already has het details, so our briefing to Susan next week is really to get her input on (i) the "next steps" portion of this and (ii) the paper for Cynthia.

Evan

From: Kaul, Meetu
Sent: Friday, August 28, 2015 4:34 PM
To: Belser, Evan; Werner, Jacqueline
Subject: RE: VW - briefing and enforcement response plan

Sure thing.

Do want to keep it at this level for Susan and shorten for Cynthia? Or just have one briefing?

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Belser, Evan
Sent: Friday, August 28, 2015 4:32 PM
To: Kaul, Meetu; Werner, Jacqueline
Subject: RE: VW - briefing and enforcement response plan

Meetu,

Thanks for this. You've got all the right elements, but too much information for Cynthia's level. Could you find a way to shorten to 1.5 pages or so? Also, let's have the Byron write-up handy, but not attach it.

Thanks,
Evan

From: Kaul, Meetu
Sent: Friday, August 28, 2015 3:10 PM
To: Werner, Jacqueline; Belser, Evan
Subject: VW - briefing and enforcement response plan
Importance: High

Hi Jacqueline and Evan,

Let me know if this is the level of detail you were thinking for this briefing. I have it simultaneously directed at Phill, Susan and Cynthia.

-Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE Member Connection
Sent: Sat 8/29/2015 9:38:59 AM
Subject: Open Forum Digest for Friday August 28, 2015

[redacted]

Open Forum

Post New Message Online Post New Message via Email

Aug 28, 2015

started yesterday, Jerry Alcone (9 replies)

Reducing under hood temperatures

1 Get the exhaust manifolds ceramic coated. It'll... Patrick Jennings

2 It is an interesting issue. I work with the SAE... Nathan Taylor

3 Good point on cowl induction, I will survey... Jerry Alcone

4 Yea I have noticed that many of latest models... Jerry Alcone

5 Jerry - It's probably not a good idea to mess... Duane Abata

6 I must respectfully disagree. OEM engineers are... Jerry Alcone

7 Keep in mind people, that Jerry is in New Mexico... Christopher Sheridan-Bebeau

8 I recommend against removing the seal at the... Matthew Bartlett

9 Matthew good points I am racking my brain on how... Jerry Alcone

started yesterday, Serdar Uckun (3 replies)

Shackle Load Monitoring Design Challenge

10 Message Edward Fontana

11 don't think the soft shackle is what Sedar... Jerry Alcone

started 2 days ago, Jerry Alcone (9 replies)

plastic design

12 What ever happened to "break all sharp

edges" 5... Jerry Alcone

Jerry, As an industrial designer who has... John Wanberg

started 2 days ago, William Lin (4 replies)

Insurance company's device for "driving skill" assessment

William part of my job is to test any devices... Robert Gruszczynski

started 4 days ago, Jerry Alcone (18 replies)

Help! my 2002 S10 eats Right Rear turn signal bulbs

Jerry, I also had this problem on a vehicle. ... Arthur Cortellucci

Thanks Arthur I'm lining up my emery paper and... Jerry Alcone

Well Jerry, looks like the responses favor... Jim Lawrence

Ha Ha why bleass mah soul, yu myut bea riute. I... Jerry Alcone

started 4 days ago, Jerry Alcone (4 replies)

Your favorite story about non-technical types over ruling engineering decisions for cost or schedule reasons.

1 Ralph, I agree the Hyatt failiure was not... Daniel Rauchholz
started one month ago, Lindsay Silver (4 replies)

Haven't uploaded a profile photo yet? Get to it--and maybe win something!

2 Happy Friday to these smiling faces: Anil... Lindsay Silver
started 2 months ago, Lindsay Silver (76 replies)

Introduce yourself here.

2 Hello My Name is Greg Pfahl, I am an Engineer at... Gregory Pfahl

2 Hello The name given to me is Lucciano. I... Lucciano Diaz

top next

1. Re: Reducing under hood temperatures

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-

Patrick Jennings

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2. Re: Reducing under hood temperatures

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-

Nathan Taylor

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3. Re: Reducing under hood temperatures

Aug 28, 2015 8:27 AM

Jerry Alcone

Good point on cowl induction, I will survey pressure across cowl and see if I can get away with venting at the sides, won't yield as much area, but might work. I built a cowl induction for my 93 Silverado and it vents at sides while breathing across middle (about 75% of width), really perked up the 60 to 80 mph time.

Jerry Alcone
Retired
Albuquerque NM

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4. Re: Reducing under hood temperatures

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-

Jerry Alcone

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5.

Aug 28, 2015 10:23 AM

Duane Abata

Jerry - It's probably not a good idea to mess with air flow under the hood or insulate components. I agree that components become a bit warm but the air flow and heat transfer are well thought out in the design process. The seal is there for a reason, otherwise the manufacturer would save a few dollars per unit and just leave it out. The seal prevents air from bypassing the engine compartment. With the seal, flow must move downward rather than vent upward. Taking the hood off completely may actually cause problems at low

speeds! Heat does not necessarily destroy plastic components. Age and exposure to hydrocarbons do long term harm but they can't be avoided.

Duane Abata
Professor Mech Engrg
South Dakota School of Mines & Tech
Rapid City SD

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Re: Reducing under hood temperatures

6.

- Aug 28, 2015 10:37 AM

  Jerry Alcone

  RE: Reducing under hood temperatures

I must respectfully disagree. OEM engineers are great but bean counters and stylists rule. Seal is probably for rain and to keep vapor deposits off windshield. Example of bean counter mentality. First thing I saw the first time I looked at S10 engine was that someone had forgot that the air inlet horn to filter box was originally designed for 2 headlight truck and when they added second head light it was now located 2 inches behind the

headlight instead of being exposed to open air stream. See attached RA data

---

Jerry Alcone
Retired
Albuquerque NM

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7. Re: Reducing under hood temperatures

Reply All Reply All

Aug 28, 2015 1:09 PM

Christopher Sheridan-Bebeau

Keep in mind people, that Jerry is in New Mexico where temperatures tend to get hotter than normal. GM designers back in 2001 probably designed the truck to be usable in most conditions which might not extend to a climate that consistently experiences temperatures over 100 degrees Fahrenheit every summer.

I agree with the idea to get the exhaust manifold coated, even wrapped. I also suggest a cold air induction kit to improve volumetric efficiency. I suggest against taking out that firewall gasket though. It's there to prevent dead leaves and twigs from falling into your engine compartment and starting a fire.

Christopher Sheridan-Bebeau
Graduated ME Student
Cincinnati OH

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8. Re: Reducing under hood temperatures

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Matthew Bartlett

I recommend against removing the seal at the rear of the hood.

You'll allow hot under-hood air to enter the fresh air intake in the plenum at the base of the windshield and enter the cabin.

It will increase the load on your AC, might even overwhelm the cooling capacity.

And, you'll get all those pleasant under-hood odors to enjoy while you drive.

Matt Bartlett

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9. Re: Reducing under hood temperatures

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-

Jerry Alcone

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10 Re: Shackle Load Monitoring Design Challenge

Reply Reply

Aug 28, 2015 7:12 AM

Edward Fontana

http://forum.ih8mud.com/threads/southeas
overland-soft-shackles.596332/

Edward Fontana
Systems Engineer

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1 1Re: Shackle Load Monitoring Design Challenge

Reply All Online | Reply All Email

-

Jerry Alcone

Email Sender View Thread Recommend Forward Flag as Inappropriate

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12Re: plastic design

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-

Jerry Alcone

I

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13Re: plastic design

Aug 28, 2015 1:28 PM

John Wanberg

Jerry,

As an industrial designer who has been involved in the design of countless molded plastic parts, I can probably speak very well to this shortcoming of the plastics designs you are seeing. This problem is, indeed, very closely linked to a particular design's aesthetics, especially as they relate to the thermal coefficient of expansion of the plastics used in the design. Designers tend to be very conscientious of surface aesthetic requirements and, therefore, avoid large variations in a part's nominal wall

thickness that may cause "sink"--or visible contraction of the plastic material away from the aesthetic surface during cooling within the mold due to uneven material thicknesses in the part. This phenomenon comes into play anytime a rib, gusset, or boss is designed into the back side of an aesthetic surface, so a general guiding principle for such designs is that these features should be not be sized above 1/2 to 3/4 the nominal wall thickness of that aesthetic surface. This guideline becomes extra problematic for plastic flow in a mold when the the thickness of these features needs to be as thick as possible for strength and reinforcement purposes because additional fillets at the edges of these features end up increasing the cross-sectional area at those points and, consequently, the possibility of visible

sink on the aesthetic surface of the part. For parts with tight or sharp filleted corners at the edge of an aesthetic surface, this can also be a problem because visible sink may be caused at those corners if the inner corner has a large fillet added to it for mold flow purposes.

Where outer surface aesthetics do not play a significant role, there really is not excuse (other than the occasional issue of fitment between some components--which is another ball of wax all together) for a plastics designer to not put sufficient fillets into the part to accommodate for proper mold flow and increased part strength.

Your dilemma is definitely one for concern, but most parts tend to be a combination of give and take in one way

or another. For parts produced with a strong aesthetics directive, mold performance and part strength often see the short end of the stick. :(

John Wanberg
Associate Professor
Metropolitan State University
Aurora CO

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Re: Insurance company's device for "driving skill" assessment

Aug 28, 2015 8:24 AM

Robert Gruszczynski

William – part of my job is to test any devices that connect to the On Board Diagnostics (OBD) port to determine if there are any detrimental effects on our vehicles. I am also a member of the SAE Committee that defines the standards that govern the operation of the port.

First, let me state that the OBD systems in vehicles were never designed for this use case. The OBD systems in vehicles are designed for a specific purpose – that is to meet emissions laws. It is possible for

uncontrolled devices to potentially disrupt such systems by:

Disrupting internal system operation

Vulnerability to outside intrusion into vehicle systems

My testing has been to attempt to be sure that such disruption does not occur in our vehicles. I have tested many devices based on their availability to me. There are literally hundreds of devices available on the market. Unfortunately, I do not have the resources to test them all. First and foremost, there are specific laws governing the data to be provided by an OBD system. There are International Standards that govern the format of the data and also govern the method of access to that data via the diagnostic connector.

My testing has been to determine how closely any of these devices comply with those standards. My findings are that most of these devices do not comply very well with the standards. Many vehicles/OEMs appear to be robust enough to not be affected by the deviations to the standards exhibited by these devices. Some other vehicle manufacturers have not been so fortunate.

http://boston.cbslocal.com/2015/05/18/i-team-drivers-say-insurance-device-put-them-in-danger-on-the-road/

http://www.kirotv.com/news/news/america family-insurance-recalls-vehicle-usage-mo/ngfp4/

http://www.theverge.com/2015/8/11/9130 hack-corvette-brakes-insurance-dongle

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15 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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Arthur Cortellucci

Jerry,
I also had this problem on a vehicle. In addition to the bad ground check,
I would also check for some corrosion on the contacts to the bulb and also
at the plug in point for the wiring harness.
Even a light corrosion will
change the resistance and cause more current to flow through the bulb and
shorten the life.
Another important step, after you clean these contacts, add some
di-electric grease before reconnecting the plug and at the contacts at the
bulb before plugging in the bulb. That should keep out any moisture and
stop further corrosion.

Art Cortellucci

retired

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16 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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-

Jerry Alcone

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17 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

Reply Reply

Aug 28, 2015 7:42 AM

Jim Lawrence

Well Jerry, looks like the responses favor vibration as possible cause. Considering speech is noise and noise is vibration, is the passenger seat normally occupied and by whom? We don't have that problem in the southeast. Thats why we talk funny down heah.

Jim Lawrence
Retired
Summerfield NC

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18 Re: Help! my 2002 S10 eats Right Rear turn signal bulbs

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-

Jerry Alcone

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19 Re: Your favorite story about non-technical types over ruling engineering decisions for cost or schedule reasons.

Aug 28, 2015 10:58 AM

Daniel Rauchholz

Ralph,

I agree the Hyatt failure was not about cost reduction -- probably more realistically schedule issues, or simple it was going to be a pain to do.

The Union Carbide disaster in Bhopal, India is another tragic example. As I understand that situation, this was a plant that was being shut down by Union Carbide. Because of this several cost cutting measures were taken / shortcuts taken. A faulty valve caused water to pour into a gas storage unit, causing a

heat build up. The coolant for that tank had been diverted to another area to save money. A safety ssytem that would have neutralized the reaction had been turned off a few weeks earlier, because no one thought it was necessary with decreased production. The heat/pressure build up got too high for the safety systems, releasing a toxic cloud on the city. Somewhere around 35,000 people died.

Daniel Rauchholz
NVH Manager
UGN Inc
Farmington Hills MI

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20 Re: Haven't uploaded a profile photo yet? Get to it--and maybe win something!

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-

Lindsay Silver

Anil Dabideen

Emmanuel Jay Manuel

'

Michael Skirha

Nicholas Schmidt

Shastina Holmes

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21Re: Introduce yourself here.

-

Gregory Pfahl

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22Re: Introduce yourself here.

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Lucciano Diaz

Hello

The name given to me is Lucciano. I'm currently working at 18Ventures, were we build 1 venture in 7 days 18 times, or 18 ventures in 18 weeks. I'm also building a nuclear fusion reactor on my garage, and doing some research on how to extract nitrogen from the air we breath.

Thank you.

Nice to meet you all !

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From: Brooks, Phillip
Importance: Normal
Subject: Ex. 5, 7
Start Date/Time: Mon 8/31/2015 8:30:00 PM
End Date/Time: Mon 8/31/2015 9:30:00 PM

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/31/2015 12:13:56 PM
Subject: A.M. NEWSCAST: Marchionne: Alliance with GM would bring 'cataclysmic changes' | Jeep hackers join Uber | Suzuki, VW split | '17 Town & Country | Snyder: Calendar comeuppance

August 31, 2015

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TOP STORY: Marchionne undeterred

Jeep hackers join Uber »

Snyder: Sales justice »

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Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 8/31/2015 12:14:14 PM
Subject: A.M. NEWSCAST: Marchionne: Alliance with GM would bring 'cataclysmic changes' | Jeep hackers join Uber | Suzuki, VW split | '17 Town & Country | Snyder: Calendar comeuppance

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From: Glodich, Jeffrey (J.M.)
Location: Toyota, Ann Arbor
Importance: Normal
Subject: SAE J1634 LDVP Committee Meeting
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:30:00 PM

…
;;;
Purpose: Agree on final updates before 1st level balloting.
SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.
Call in numb Ex. 6
Access code
Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>
meeting id Ex. 6
access code

From: Glodich, Jeffrey (J.M.)
Location: Toyota, Ann Arbor
Importance: Normal
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Call in number Non-Responsive
Access code Non-Responsive
Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>
meeting id
access code Non-Responsive

From: Glodich, Jeffrey (J.M.)
Location: Toyota, Ann Arbor
Importance: Normal
Subject: SAE J2263 LDVP Committee Meeting
Start Date/Time: Thur 9/24/2015 5:00:00 PM
End Date/Time: Thur 9/24/2015 7:30:00 PM

…
;;;
Purpose: Focused on J2263 next steps. Agenda TBD.
SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.
Call in numb Ex. 6
Access code
Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>
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Importance: Normal
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Access code Non-Responsive
Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>
meeting id
access code Non-Responsive

To: Fried, Gregory[Fried.Gregory@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Chapman, Apple[Chapman.Apple@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]
From: Belser, Evan
Sent: Mon 8/31/2015 1:12:47 PM
Subject: RE: Agenda Items

AED

- Request for FY15 OECA Accomplishments
- AED Chron File
- OC's Smart Tools Workgroup
- ICECE (Beijing Conference)
- Amelie's farewell this Wed
- Peace Corps Job Fair

MSEB V&E:

- VW
- AMCC Policy
- Waivers negotiation with DOJ
- Request for Mario's testimony in S.C. CBP forfeiture action

From: Fried, Gregory
Sent: Monday, August 31, 2015 9:07 AM
To: Brooks, Phillip; Chapman, Apple; Werner, Jacqueline; Thompson, Christopher; Belser, Evan
Subject: Agenda Items

Send your agenda items my way. Thanks!

Gregory Fried

Chief, Stationary Source Enforcement Branch

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

202-564-7016

fried.gregory@epa.gov

From: Kaul, Meetu
Importance: Normal
Subject: AED General - VW
Start Date/Time: Tue 9/1/2015 3:00:00 PM
End Date/Time: Tue 9/1/2015 4:00:00 PM

From: Kaul, Meetu
Importance: Normal
Subject: OCE Weekly with Cynthia - VW
Start Date/Time: Thur 9/3/2015 7:00:00 PM
End Date/Time: Thur 9/3/2015 8:30:00 PM

To: Belser, Evan[Belser.Evan@epa.gov]
Cc: Fried, Gregory[Fried.Gregory@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Chapman, Apple[Chapman.Apple@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]
From: Werner, Jacqueline
Sent: Mon 8/31/2015 2:52:01 PM
Subject: Re: Agenda Items

Non-Responsive

Sent from my iPhone
Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

On Aug 31, 2015, at 9:12 AM, Belser, Evan <Belser.Evan@epa.gov> wrote:

Non-Responsive

MSEB V&E:

- VW

Non-Responsive

From: Fried, Gregory
Sent: Monday, August 31, 2015 9:07 AM
To: Brooks, Phillip; Chapman, Apple; Werner, Jacqueline; Thompson, Christopher; Belser, Evan
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Send your agenda items my way. Thanks!

Gregory Fried

Chief, Stationary Source Enforcement Branch

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

202-564-7016

fried.gregory@epa.gov

From: Bunker, Byron
Required Attendees: Brooks, Phillip; Belser, Evan; Wehrly, Linc
Location: N12 (Byron's Office) - We will call Phil (202) 564-0652
Importance: Normal
Subject: VW Next Steps
Start Date/Time: Mon 8/31/2015 6:00:00 PM
End Date/Time: Mon 8/31/2015 7:00:00 PM

From: Bunker, Byron
Required Attendees: Brooks, Phillip; Belser, Evan; Wehrly, Linc
Location: N12 (Byron's Office) - We will call Phil (202) 564-0652
Importance: Normal
Subject: VW Next Steps
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From: Bunker, Byron
Required Attendees: Brooks, Phillip; Belser, Evan; Wehrly, Linc
Location: N12 (Byron's Office) - We will call Phil (202) 564-0652
Importance: Normal
Subject: Ex. 5, 7
Start Date/Time: Mon 8/31/2015 6:00:00 PM
End Date/Time: Mon 8/31/2015 7:00:00 PM

From: Bunker, Byron
Required Attendees: Brooks, Phillip; Belser, Evan; Wehrly, Linc
Location: N12 (Byron's Office) - We will call Phil (202) 564-0652
Importance: Normal
Subject: VW Next Steps
Start Date/Time: Mon 8/31/2015 6:00:00 PM
End Date/Time: Mon 8/31/2015 7:00:00 PM

From: Brooks, Phillip
Location: N12 (Byron's Office) - We will call Phil (202) 564-0652
Importance: Normal
Subject: Accepted: VW Next Steps
Start Date/Time: Mon 8/31/2015 6:00:00 PM
End Date/Time: Mon 8/31/2015 7:00:00 PM

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Gloria Bergquist
Sent: Mon 8/31/2015 3:06:12 PM
Subject: Consumer Behavior is Critical to the Success of Fuel Economy Technology

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Dear Friend of the Auto Industry,

The recent National Academy of Sciences (NAS) study, "Cost, Effectiveness and Deployment of Fuel Economy Technologies for Light-Duty Vehicles," highlights areas for a rigorous review of the CAFE program, including cost estimates, fuel economy projections and consumer acceptance.

According to the NAS report, NHTSA and EPA need a better understanding of consumer response to the fuel economy rules:

Technologies With Trade-offs Face Barriers:

"A challenge in meeting the CAFE/GHG standards in 2020-2025 lies in what further improvements can be gained from the internal combustion engine. Failing that, vehicle manufacturers may encounter significant barriers in marketing new, consumer-facing technologies, especially those with perceived or real trade-offs in vehicle utility, such as driving range for limited range Battery Electric Vehicles."

Program Cost-Benefit Cannot Be Determined Without Consumer Data:

"There are a range of theories and explanations for why consumers may or may not value lifetime fuel savings...It is important to resolve these issues because they will affect the costs and benefits of the rule."

More Research Is Needed By Agencies:

"How much consumers actually value increases in fuel economy in new vehicles is critical to evaluating the costs and benefits of fuel economy and greenhouse gas standards, but the scientific literature does not provide a definitive answer." The report concludes that "agencies should do more research on consumer valuation of fuel economy and other vehicle attributes, and consumer response to unfamiliar technologies in the vehicle market."

For more information on consumers and fuel economy, please visit

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About the Auto Alliance

The Alliance of Automobile Manufacturers, the leading advocacy group for the auto industry, represents 77% of all car and light truck sales in the United States, including the BMW Group, Fiat Chrysler Automobiles, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America and Volvo Cars North America.

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To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
Cc: Fried, Gregory[Fried.Gregory@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Chapman, Apple[Chapman.Apple@epa.gov]
From: Thompson, Christopher
Sent: Mon 8/31/2015 3:50:40 PM
Subject: RE: Agenda Items

Personnel - Non-Responsive

From: Werner, Jacqueline
Sent: Monday, August 31, 2015 8:52 AM
To: Belser, Evan
Cc: Fried, Gregory; Brooks, Phillip; Chapman, Apple; Thompson, Christopher
Subject: Re: Agenda Items

Non-Responsive

Sent from my iPhone

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

W: 202-564-1036

On Aug 31, 2015, at 9:12 AM, Belser, Evan <Belser.Evan@epa.gov> wrote:

AED

Non-Responsive

Non-Responsive

MSEB V&E:

- VW

Non-Responsive

From: Fried, Gregory
Sent: Monday, August 31, 2015 9:07 AM
To: Brooks, Phillip; Chapman, Apple; Werner, Jacqueline; Thompson, Christopher; Belser, Evan
Subject: Agenda Items

Send your agenda items my way. Thanks!

Gregory Fried

Chief, Stationary Source Enforcement Branch

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

202-564-7016

fried.gregory@epa.gov

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7
Sent: Mon 8/31/2015 4:45:00 PM
Subject: RE: Can we reschedule our call for next week?
EPA meeting 31 Aug 15.pptx

Linc,

Ex. 7

Ex. 7

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Monday, August 31, 2015 7:04 AM
To: Ex. 7
Subject: RE: Can we reschedule our call for next week?

I think that should be good.

inc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Ex. 7
Sent: Monday, August 31, 2015 9:31 AM

To: Wehrly, Linc
Subject: RE: Can we reschedule our call for next week?

OK. Is one hour all we need for this meeting?

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Monday, August 31, 2015 5:16 AM
To: M Ex. 7
Subject: RE: Can we reschedule our call for next week?

Ex. 7

How about 10 am PST today. We can use the following call-in number:

8662993188

Non-Responsive

Please let me know if you have any questions.

Thanks,

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Ex. 7
Sent: Thursday, August 27, 2015 3:20 PM
To: Wehrly, Linc
Subject: RE: Can we reschedule our call for next week?

Linc,

Look link Monday is the only day I have free next week. I am available from 10 to 12 PST for a call if that works for you.

Ex. 7

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Thursday, August 27, 2015 7:49 AM
To: Ex. 7
Subject: Can we reschedule our call for next week?

Ex. 7

Sorry to do this, but our schedule has gotten complicated and it doesn't look like we could participate in a call today after all. Could we try for early next week? If so, could you let me know what your schedule is like next week and possibly propose a date and time.

Thanks,

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

Cc: karen.dworkin@usdoj.gov[karen.dworkin@usdoj.gov]; Leslie Allen[Leslie.Allen@usdoj.gov]
To: Walter Benjamin Fisherow[Walter.Benjamin.Fisherow@usdoj.gov]
From: Brooks, Phillip
Sent: Mon 8/31/2015 4:45:07 PM
Subject: VW

We have a coordination call with CARB at 4:30pm today would like to have DOJ participate. Purpose is introductions, discussion of points of contact and general organizational issues. Little substance.

Non-Responsive

Sent from my iPhone

To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Fisherow, Walter Benjamin (ENRD)[Walter.Benjamin.Fisherow@usdoj.gov]
Cc: Allen, Leslie (ENRD)[Leslie.Allen@usdoj.gov]
From: Dworkin, Karen (ENRD)
Sent: Mon 8/31/2015 4:52:27 PM
Subject: RE: VW

Thanks Phill. We will join. **Ex. 4, 5, 7**

-----Original Message-----
From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Monday, August 31, 2015 12:45 PM
To: Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
Cc: Dworkin, Karen (ENRD) <KDworkin@ENRD.USDOJ.GOV>; Allen, Leslie (ENRD) <LAllen@ENRD.USDOJ.GOV>
Subject: VW

We have a coordination call with CARB at 4:30pm today would like to have DOJ participate. **Ex. 5, 7**

Ex. 5, 7

Non-Responsive

Sent from my iPhone

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 8/31/2015 8:36:57 PM
Subject: DAILY: FCA details incentives for completing old recalls | Suzuki to go it alone as VW battle ends | Startup Chinese EV maker gets big investors

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FCA details buy-backs, incentives for completing older recalls

Fiat Chrysler Automobiles today issued details on its buy-back and incentive program offered to more than 1 million owners of vehicles recalled in 2013 but for which recall repair programs weren't immediately available.

Suzuki plans to go it alone after 4-year dispute with VW ends

Suzuki says independence will be a "precondition" for future dealings after an international court ended a failed cooperation with Volkswagen after a four-year dispute. Arbitrators upheld Suzuki's request to terminate a 2009 agreement forcing Volkswagen to sell its 19.9 percent stake in Suzuki.

MOST READ (Last 7 days)

Dodge Barracuda convertible next-gen Charger among surprises for FCA dealers in Las Vegas
Ford, UAW in

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Internet entrepreneurs back Chinese electric vehicle startup, NextEV

A group of deep-pocketed China-based internet entrepreneurs and financial investors, including Tencent and Hillhouse Capital, is backing an effort to create NextEV, a new rival to U.S. electric car maker Tesla Motors.

Ford talks to revive Ranger sales, output in U.S.

GM's Duramax V-8 engine to power U.S. Army's Humvee replacemer

Tesla Model S breaks Consumer Reports' test scale

Ten automaker sued in U.S. over keyless ignitions

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Volkswagen must sell shares in Suzuki, international court decides

Volkswagen must sell its shares in estranged partner Suzuki, an international court decided, ending a nearly four-year battle over a dysfunctional alliance between the two carmakers.

Grupo Antolin closes on acquisition of Canadian auto supplier Magna International Inc.'s interiors operations today in a deal valued at about $525 million.

Renault, Nissan halt $756 million India investment, report says

Racketeering case against M-B store fails

Enzo Ferrari's Hollywood horsepower

Post-Piech, VW's Phaeton gets delayed

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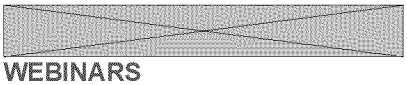
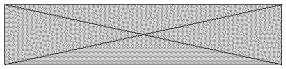


WEBINARS
» Sept. 1 at 2pm ET - Used Inventory Financing
by NextGear Capital



» Oct. 1 - Automobilwoche Kongress
» Oct. 14 - Best Dealerships To Work For

» Sept. 10 at 2pm ET - Buyer Detection
by Outsell
» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global
» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

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Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 8/31/2015 8:37:11 PM
Subject: DAILY: FCA details incentives for completing old recalls | Suzuki to go it alone as VW battle ends | Startup Chinese EV maker gets big investors

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Ford, UAW in

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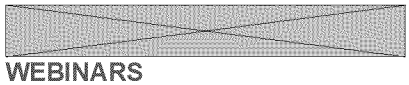

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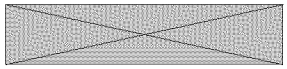
» Sept. 1 at 2pm ET - Used Inventory Financing
by NextGear Capital



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From: Bunker, Byron
Location: Ex. 7 Byron call / Ex. 7
Importance: Normal
Subject: Accepted: VW diesel issue
Start Date/Time: Tue 9/1/2015 5:00:00 PM
End Date/Time: Tue 9/1/2015 5:45:00 PM

To: Ex. 6
From: Belser, Evan
Sent: Mon 8/31/2015 10:21:43 PM
Subject: RE: aftermarket diesel emissions defeat discussion w/ EPA

Ex. 6

Circling back on this email. Any feedback?

Thanks,
Evan

From: Belser, Evan
Sent: Thursday, June 11, 2015 6:21 PM
To: Ex. 6
Subject: RE: aftermarket diesel emissions defeat discussion w/ EPA

Gentlemen,

Thank you for the helpful discussion today. As discussed, below my signature is some language concerning the so-called competition use exemption for which I welcome your response. Also, I appreciate your sharing your point of contact at CARB concerning testing protocol for aftermarket products.

Best Regards,
Evan

Evan Belser
Acting Chief, Mobile Source Enforcement Branch, Air Enforcement Division
National Coordinator for Administrative Litigation, Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
202-564-6850

As a legal matter, under the CAA there is no "competition only" exemption for motor vehicles or motor vehicle engines. "Motor vehicle" is defined as "any self-propelled vehicle designed for transporting persons or property on a street or highway." CAA § 216(2); 42 U.S.C. § 7550(2); *see also* 40 C.F.R. § 85.1703 (further defining "motor vehicle"). These definitions make no exemption for motor vehicles or motor vehicle engines used for competition.[1] More generally, these definitions are based on vehicle attributes and make no exemption for vehicles based on their use.

The EPA has consistently adhered to the plain language definition of "motor vehicle." *See, e.g.*:

- 39 Fed. Reg. 32,609 (Sept. 10, 1974) (EPA rejecting proposal to exempt from the definition of "motor vehicle" certain vehicles "based solely on the intended use

by the purchaser" because "[t]he Agency views a policy of exclusion based upon owner intent to be virtually unmanageable and inconsistent with the Act because vehicles with on-road, off-road capabilities are typically operated in both situations");

- EPA, *Fact Sheet: Exhaust System Repair Guidelines* (Mar. 13, 1991) (explaining that "it is not legal for anyone to 'de-certify' a motor vehicle for 'off-road' use," and that it is not legal to bypass, defeat, or render inoperative a motor vehicle emission control system as that system was designed by the manufacturer, even where that system was already defeated);
- EPA fact sheet describing settlement of *United States v. Casper's Electronics, Inc.*, Civ. No. 1:06-cv-03542 (N. D. Ill.) (July 10, 2007), http://www2.epa.gov/enforcement/caspers-electronics-inc-clean-air-act (last visited February 6, 2015) ("These [defeat] devices were advertised for 'off road use only' or 'non-road use only.' However, the O2 Sims were designed and marketed to be used in regular production vehicles ('on road or 'on highway' vehicles), which is illegal under the Clean Air Act."); and
- EPA Presentation at November 2010 Specialty Equipment Market Association Show, *Diesel Aftermarket Parts Discussion* ("Q1: Am I protected from selling a defeat device or tampering as long as I inform my customers that they can only use my parts 'off-road' or 'for racing use only' or that the parts are 'not for installation on emission-controlled vehicles'? A: No, if the parts are designed for and intended to be installed on certified motor vehicles, EPA considers you to still be liable under the CAA prohibited acts.").

1. In contrast, the CAA exempts from the definition of "nonroad vehicle" and "nonroad engine" those vehicles and engines used solely for competition. CAA § 216(10)-(11); 42 U.S.C. § 7550(10)-(11). The EPA has implemented regulations describing how to exempt from CAA requirements nonroad vehicles and engines used solely for competition. 40 C.F.R. § 1068.235. These regulations explicitly do not apply for motor vehicles and motor vehicle engines. 40 C.F.R. § 85.1701(a)(1).

-----Original Appointment-----
From: Ex. 6
Sent: Monday, June 08, 2015 9:27 AM
To: Ex. 6
Subject: aftermarket diesel emissions defeat discussion w/ EPA
When: Thursday, June 11, 2015 2:00 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Non-Responsive

New time to accommodate schedules.

The purpose of this meeting is to discuss information contained in various communications shared between Powerteq and the regulatory teams at EPA & CARB. Over the past two years we Ex. 6 have shared numerous specific examples of AECD Defeat (illegal) products and business practices by rogue SEMA member companies. This call is to discuss next steps and/or provide additional information that can help the agencies 'level the playing field'.

Please extend an invitation to any additional team members.

Ex. 6

[1] In contrast, the CAA exempts from the definition of "nonroad vehicle" and "nonroad engine" those vehicles and engines used solely for competition. CAA § 216(10)-(11); 42 U.S.C. § 7550(10)-(11). The EPA has implemented regulations describing how to exempt from CAA requirements nonroad vehicles and engines used solely for competition. 40 C.F.R. § 1068.235. These regulations explicitly do not apply for motor vehicles and motor vehicle engines. 40 C.F.R. § 85.1701(a)(1).

To: Ex. 7 @vw.com]
Cc: Ex. 7 @vw.com]
From: Good, David
Sent: Mon 8/31/2015 10:53:25 PM
Subject: Re: 2016 FE Guide - Errors in Verify as of 6AM on August 31, 2015; Last day to make changes for the 2016 Printed Guide is Sept 1, 2015
VW_Group_2016 FE Guide-all rel dates-no-sales-8-31-2015.xlsx

Ex. 7

Re: 2016 FE Guide - Errors in Verify as of 6AM on August 31, 2015; Last day to make changes for the 2016 Printed Guide is Sept 1, 2015

Printed Guide – For the 2016 Printed Guide, I will send all error-free data in Verify to DOE on September 2, 2015, regardless of release date. The data will not be released outside of EPA & DOE offices until the week of November 16, 2015, when 2016 Printed Guides are scheduled to be mailed to dealerships, libraries and credit unions. Please email me if there are data in Verify which you do not want included in the 2016 Printed Guide.

Attached are the data in Verify as of 6AM on August 31, 2015. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov or included in the 2016 Printed Guide.

Please make any needed corrections to Verify before COB Sept 1, 2015.

Thanks

Dave

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Tue 9/1/2015 12:58:59 PM
Subject: Ex. 4 - CBI

Hello Jim,

I've spoken with our Lamborghini certification colleagues, and they would like to (your schedule permitting of course) schedule a conference call within the next few days to discuss Ex. 4 - CBI

Ex. 4 - CBI

Please let me know your schedule, and if EPA is willing to discuss I can send out a conference call meeting when a time has been agreed upon.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Tue 9/1/2015 1:15:45 PM
Subject: RE: Audi Q7 questions

Hello Jim,

Ex. 4 - CBI

Let me know if you need more information.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Rodgers, William (EEO)
Sent: Monday, August 31, 2015 3:53 PM
To: "Jim Snyder' (Snyder.Jim@epamail.epa.gov)'
Cc: Allen, Gregory (EEO); Giles, Michael
Subject: Audi Q7 questions

Hello Jim,

I received your phone message late in the day regarding the 2017 Audi Q7:

Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Chapman, Apple[Chapman.Apple@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Fried, Gregory[Fried.Gregory@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]
From: Belser, Evan
Sent: Tue 9/1/2015 1:44:17 PM
Subject: RE: AED general agenda items?

- Rules
- Vehicles and Engines:
  - Harley
  - VW
- Fuels
- Stationary:
  - Luminant
- Personnel

Other potential topics if others want to include:

- OC's Smart Tools Workgroup soliciting members
- Yamaha
- AMCC Policy
- AED's Contributions to FY15 OECA Accomplishments

From: Chapman, Apple
Sent: Monday, August 31, 2015 2:10 PM
To: Werner, Jacqueline; Fried, Gregory; Brooks, Phillip; Belser, Evan; Thompson, Christopher
Subject: AED general agenda items?

Any agenda items for the AED general tomorrow with Susan? We did not discuss during our internal.

We should update her on Luminant – we had a call with DOJ and OGC last Friday regarding an appeal.

Thanks

Ms. Apple Chapman

Associate Director, Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave. NW, Washington DC, 20004

202-564-5666 (office)

202-841-6076 (cell)

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 1:52:34 PM
Subject: Running Change Fuel Economy 2016 Audi S8

Hi Dave;

A reminder to look into this issue when you have time on Thursday, maybe. First allow me to

Ex. 4 - CBI

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Belser, Evan[Belser.Evan@epa.gov]; Chapman, Apple[Chapman.Apple@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Fried, Gregory[Fried.Gregory@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Thompson, Christopher
Sent: Tue 9/1/2015 2:13:23 PM
Subject: RE: AED general agenda items?

Non-Responsive

From: Belser, Evan
Sent: Tuesday, September 01, 2015 7:44 AM
To: Chapman, Apple; Werner, Jacqueline; Fried, Gregory; Brooks, Phillip; Thompson, Christopher
Subject: RE: AED general agenda items?

- Rules
- Vehicles and Engines:

Non-Responsive

  - VW
- Fuels
- Stationary:

Non-Responsive

- Personnel

Other potential topics if others want to include:

Non-Responsive

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Subject: AED general agenda items?

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Non-Responsive

Thanks

Ms. Apple Chapman

Associate Director, Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave. NW, Washington DC, 20004

202-564-5666 (office)

202-841-6076 (cell)

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Ex. 7
Sent: Tue 9/1/2015 2:47:25 PM
Subject: VW

Meetu-

Thanks for the voicemail. I have wide availability today so happy to talk whenever works for you. Noon would work fine for me if that still works for you.

Look forward to chatting.

Ex. 7

Trial Attorney

U.S. Department of Justice

Environment and Natural Resources Division

Environmental Enforcement Section

P.O. Box 7611

Washington, DC 20044-7611

Ex. 7

f: 202.514-0097

Ex. 7

Overnight:

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Washington, DC 20004

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To: Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]
From: Kaul, Meetu
Sent: Tue 9/1/2015 2:50:59 PM
Subject: RE: VW

Hi Josh,

How about 12:30 – my 11:00 may run a bit over.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Van Eaton, Josh (ENRD) [mailto:Josh.Van.Eaton@usdoj.gov]
Sent: Tuesday, September 01, 2015 10:47 AM
To: Kaul, Meetu
Subject: VW

Meetu-

Thanks for the voicemail. I have wide availability today so happy to talk whenever works for you. Noon would work fine for me if that still works for you.

Look forward to chatting.

JVE

Joshua H. Van Eaton

Trial Attorney

U.S. Department of Justice

Environment and Natural Resources Division

Environmental Enforcement Section

P.O. Box 7611

Washington, DC 20044-7611

p:202.514-5474

f: 202.514-0097

josh.van.eaton@usdoj.gov

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To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]; Kodish, Jeff[Kodish.Jeff@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Fried, Gregory[Fried.Gregory@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Chapman, Apple
Sent: Tue 9/1/2015 2:51:08 PM
Subject: Re: Draft AED General Agenda

I won't be joining. Seema is calling in for Luminant but she can't call until 11:30.

Apple Chapman
OECA
Air Enforcement Division
Sent from my iPhone
202-841-6076

On Sep 1, 2015, at 10:42 AM, Werner, Jacqueline <Werner.Jacqueline@epa.gov> wrote:

> We have the AED General at 11am today. Below please see the draft agenda. Please let me know asap if you have any changes.
>
> Thanks,
>
> jj
>
> **AED General with Susan/Rosemarie**
>
> **September 1, 2015**
>
> -
>
> General:

Non-Responsive

-

-

SSEB:

Non-Responsive

-

-

-

MSEB:

-

Non-Responsive

-

•□□□□□□□ VW

-

Personnel:

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

From: Kaul, Meetu
Required Attendees: Van Eaton, Josh (ENRD)
Location: I will call you
Importance: Normal
Subject: VW
Start Date/Time: Tue 9/1/2015 4:30:00 PM
End Date/Time: Tue 9/1/2015 5:00:00 PM

From: Kaul, Meetu
Required Attendees: Van Eaton, Josh (ENRD)
Location: I will call you
Importance: Normal
Subject: VW
Start Date/Time: Tue 9/1/2015 4:30:00 PM
End Date/Time: Tue 9/1/2015 5:00:00 PM

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 2:57:41 PM
Subject: 5250 ETW cut point Standard SUVS

Hi Dave;

I thought I better not bother you with a phone call, but I was wondering if you can provide the new cut point for a 5250 lbs ETW, for a Standard Sport Utility Vehicle that is in your draft list and yet to be issued. Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI You said that we may see the official notice with new cut pints this week.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Tue 9/1/2015 3:22:17 PM
Subject: RE: 5250 ETW cut point Standard SUVS

Richard,

5250 ETW truck cut points = 21.7 mpg city, 32.2 mpg hwy.

Standard SUV non-hybrid vehicle, non-diesel class leader cut points = 26.0 city, 38.8 hwy.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, September 01, 2015 10:58 AM
To: Good, David
Subject: 5250 ETW cut point Standard SUVS

Hi Dave;

I thought I better not bother you with a phone call, but I was wondering if you can provide the new cut point for a 5250 lbs ETW, for a Standard Sport Utility Vehicle that is in your draft list and yet to be issued. Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI You said that we may see the official notice with new cut pints this week.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

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Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Washington, Debra[Washington.Debra@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/1/2015 4:29:25 PM
Subject: Paper for Cynthia on Volkswagen Matter
VW Initial Briefing 9 3 15.docx

Hi Debra,

Susan signed off on sharing this paper with Cynthia for this Thursday's general.

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Belser, Evan
Sent: Monday, August 31, 2015 9:55 PM
To: Washington, Debra; Shinkman, Susan
Cc: Brooks, Phillip; Werner, Jacqueline; Kaul, Meetu; Orehowsky, Gregory
Subject: VW Paper for Susan, Cynthia

Debra and Susan,

Please find attached a briefing paper for the VW matter for tomorrow's AED General. We will bring hard copies.

Thanks,

Evan

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Washington, Debra
Sent: Tue 9/1/2015 4:52:08 PM
Subject: RE: Paper for Cynthia on Volkswagen Matter

Thank You.

Debra A. Washington

Staff Specialist, Office of Civil Enforcement

Direct: 202 564-4073

Office: 202 564-2220

From: Kaul, Meetu
Sent: Tuesday, September 01, 2015 12:29 PM
To: Washington, Debra
Cc: Belser, Evan
Subject: Paper for Cynthia on Volkswagen Matter

Hi Debra,

Susan signed off on sharing this paper with Cynthia for this Thursday's general.

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator

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Subject: VW Paper for Susan, Cynthia

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Please find attached a briefing paper for the VW matter for tomorrow's AED General. We will bring hard copies.

Thanks,

Evan

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Good, David
Sent: Tue 9/1/2015 5:24:48 PM
Subject: Re: 2016 FE Guide - Errors in Verify as of 6AM on Sept 1, 2015; Last day to make changes for the 2016 Printed Guide is Sept 1, 2015
VW_Group_2016 FE Guide-all rel dates-no-sales-9-1-2015.xlsx

Richard,

Re: 2016 FE Guide - Errors in Verify as of 6AM on Sept 1, 2015; Last day to make changes for the 2016 Printed Guide is Sept 1, 2015

Printed Guide – For the 2016 Printed Guide, I will send all error-free data in Verify to DOE on September 2, 2015, regardless of release date. The data will not be released outside of EPA & DOE offices until the week of November 16, 2015, when 2016 Printed Guides are scheduled to be mailed to dealerships, libraries and credit unions. Please email me if there are data in Verify which you do not want included in the 2016 Printed Guide.

Attached are the data in Verify as of 6AM on Sept 1, 2015. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov or included in the 2016 Printed Guide.

Please make any needed corrections to Verify before COB Sept 1, 2015.

Thanks

Dave

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/1/2015 6:05:05 PM
Subject: RE: Branch meeting now.

Sorry, I was on the phone with Josh at DOJ re: VW and lost track of time.

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Belser, Evan
Sent: Tuesday, September 01, 2015 1:06 PM
To: Adair, Jocelyn; Alexander, David; Kaul, Meetu
Subject: Branch meeting now.

Thanks,
Evan

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Tue 9/1/2015 6:13:26 PM
Subject: RE: Branch meeting now.

No worries Meetu.

-----Original Message-----
From: Kaul, Meetu
Sent: Tuesday, September 01, 2015 2:05 PM
To: Belser, Evan
Subject: RE: Branch meeting now.

Sorry, I was on the phone with Josh at DOJ re: VW and lost track of time.

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency Office of Civil Enforcement - Air Enforcement Division
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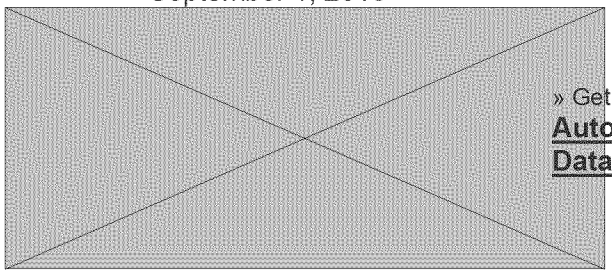
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Belser, Evan
Sent: Tuesday, September 01, 2015 1:06 PM
To: Adair, Jocelyn; Alexander, David; Kaul, Meetu
Subject: Branch meeting now.

Thanks,
Evan

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 9/1/2015 9:38:00 PM
Subject: U.S. SALES REPORT: Ford's Aug. retail gains | Weak cars ding Honda, Toyota | GM dips | Hyundai, Kia records | Jeep drives FCA | Lexus nabs 2nd win, closes in on BMW | Why the momentum may last

September 1, 2015



» Get the numbers at **Automotive News Data Center**

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Ford's U.S. retail volume best since '06

Ford Motor Co. had its best retail-sales month since March 2006 in August, selling 183,467 vehicles in the U.S. Ford posted its highest F-series number of the year and gains of at least 20 percent for five crossover and SUV nameplates.

Toyota, Honda suffer from weak car deliveries

The declines in small and midsize car sales finally caught up to both Toyota and Honda in August. Toyota Motor Sales U.S.A. reported its August sales fell 8.8 percent from a year earlier to 224,381 vehicles, while American Honda Motor Co.'s sales dropped 6.9 percent to 155,491. Both companies suffered big declines in cars that negated increases in some light trucks.

Hyundai, Kia notch records on Santa Fe, Soul

Facing stock market turmoil and an unfriendly calendar, Korean siblings Hyundai and Kia still set monthly U.S. sales records in August on strong demand for crossovers. Hyundai reported selling 72,012 vehicles for the month, a 2.9 percent increase, as Kia claimed 58,897 units sold, up 7.7 percent.

Blogs

JESSE SNYDEF

Why the mon coul last

Sales edge down but SAAR soars to 17.81 million

Nissan North America reported slight U.S. sales increase of 0.3% in August as lower car sales offset strong performance by light trucks and crossovers, the Japanese automaker said Tuesday. Sales rose 2.3% from year-earlier sales to 93,487, including 44,118 of the new Nissan Altima midsize car. The company has crossed that mark just eight months into the year.

WINNERS AND LOSERS

% change in sales among brands

	Winners	Aug.	Winners	8 mos.	Losers	Aug.	Losers	8 mos.
1	Mitsubishi	22.1%	1 Mitsubishi	24.4%	1 Smart	-53.7%	1 Smart	-36.1%
2	Volvo	18.3%	2 Jeep	20.5%	2 Scion	-37.0%	2 Scion	-22.1%
3	Jeep	17.5%	2 Land Rover	20.5%	3 Dodge	-15.1%	3 Dodge	-15.7%
4	Land Rover	16.4%	4 Mini	16.0%	4 Chrysler Division	-14.1%	4 Fiat	-11.6%
5	Infiniti	16.1%	5 Chrysler Division	14.0%	5 Toyota Division	-9.7%	5 Jaguar	-4.4%

WINNERS AND LOSERS

	Winners	Aug.
1	Mitsubishi	22.1%
2	Volvo	18.3%
3	Jeep	17.5%
4	Land Rover	16.4%
5	Infiniti	16.1%

	Winners	8 mos.
1	Mitsubishi	24.4%

2		
2	**Land Rover**	20.5%
4	**Mini**	16.0%
5	**Chrysler Division**	14.0%

	Losers	**Aug.**
1	**Smart**	-53.7%
2	**Scion**	-37.0%
3	**Dodge**	-15.1%
4	**Chrysler Division**	-14.1%
5	**Toyota Division**	-9.7%

	Losers	**8 mos.**
1	**Smart**	-36.1%
2	**Scion**	-22.1%
3	**Dodge**	-15.7%
4	**Fiat**	-11.6%
5	**Jaguar**	-4.4%

Top Selling Light Vehicles

	Aug.		**8 mos.**	
1	**Ford F series**	71,332	1 **Ford F series**	494,8(
2	**Chevrole Silverado**	54,977	2 **Chevrole Silverado**	387,17
3	**Ram pickup**	45,310	3 **Ram pickup**	294,0⁴
4	**Honda Accord**	40,931	4 **Toyota Camry**	291,8⁴
5	**Toyota Camry**	37,592	5 **Toyota Corolla**	252,1(
6	**Honda CR-V**	34,771	6 **Nissan Altima**	238,2(
7	**Nissan Altima**	32,327	7 **Honda Accord**	231,17
8	**Honda Civic**	32,031	8 **Honda CR-V**	229,57
9	**Toyota Corolla**	31,726	9 **Honda Civic**	221,47
10	**Toyota RAV4**	30,534	10 **Ford Fusion**	206,53

Top Selling Cars

	Aug.		**8 mos.**	
1	**Honda Accord**	40,931	1 **Toyota Camry**	291,8⁴
2	**Toyota Camry**	37,592	2 **Toyota Corolla**	252,1(
3	**Nissan Altima**	32,327	3 **Nissan Altima**	238,2(

4	Honda Civic		4	Honda Accord	
5	Toyota Corolla	31,726	5	Honda Civic	221,47
6	Ford Fusion	28,270	6	Ford Fusion	206,53
7	Hyundai Elantra	22,405	7	Hyundai Elantra	173,23
8	Hyundai Sonata	21,818	8	Chevrolet Cruze	163,93
9	Toyota Prius	17,757	9	Ford Focus	150,42
10	Chevrolet Malibu	17,553	10	Hyundai Sonata	141,55

Top Selling Light Trucks

		Aug.		8 mos.
1	Ford F series	71,332	1 Ford F series	494,8(
2	Chevrolet Silverado	54,977	2 Chevrolet Silverado	387,1
3	Ram pickup	45,310	3 Ram pickup	294,0
4	Honda CR-V	34,771	4 Honda CR-V	229,5
5	Toyota RAV4	30,534	5 Ford Escape	204,5
6	Ford Escape	28,870	6 Toyota RAV4	200,8
7	Nissan Rogue	27,665	7 Chevrolet Equinox	192,5(
8	Chevrolet Equinox	25,211	8 Nissan Rogue	188,1
9	Ford Explorer	23,671	9 Ford Explorer	169,4
10	GMC Sierra	21,241	10 GMC Sierra	141,8

Table sorted by year-to-date sales

	Aug. 2015	Aug. 2014	% change	8 mos. 2015	8 mos. 2014	% change
Buick	22,281	22,143	0.6%	149,386	153,298	-2.6%
Cadillac	15,738	16,650	-5.5%	110,791	114,008	-2.8%
Chevrolet	183,098	185,930	-1.5%	1,425,507	1,388,993	2.6%
GMC	49,363	47,700	3.5%	362,853	328,152	10.6%
General Motors	**270,480**	**272,423**	**-0.7%**	**2,048,537**	**1,984,451**	**3.2%**
Ford division	225,244	213,227	5.6%	1,678,929	1,637,666	2.5%
Lincoln	8,636	8,146	6.0%	65,284	60,531	7.9%
Ford Motor Co.	**233,880**	**221,373**	**5.7%**	**1,744,213**	**1,698,197**	**2.7%**
Lexus	33,487	32,809	2.1%	222,151	198,831	11.7%
Scion	3,895	6,186	-37.0%	32,691	41,949	-22.1%
Toyota Division	186,999	207,105	-9.7%	1,418,160	1,386,729	2.3%
Toyota/Scion	*190,894*	*213,291*	-10.5%	*1,450,851*	*1,428,678*	1.6%
Toyota Motor Sales	**224,381**	**246,100**	**-8.8%**	**1,673,002**	**1,627,509**	**2.8%**
Alfa Romeo	75	-	-	443	-	-

Chrysler Division						
Dodge	42,386	49,895	-15.1%	337,177	399,937	-15.7%
Ram	49,439	46,594	6.1%	318,542	298,650	6.7%
Fiat	3,388	3,362	0.8%	28,421	32,141	-11.6%
Jeep	80,804	68,766	17.5%	555,709	461,156	20.5%
FCA US	***201,672***	***198,379***	**1.7%**	***1,461,842***	***1,386,169***	**5.5%**
Ferrari*	177	176	0.6%	1,416	1,406	0.7%
Maserati	1,245	1,233	1.0%	7,506	7,807	-3.9%
Fiat Chrysler Automobiles**	**203,094**	**199,788**	**1.7%**	**1,470,764**	**1,395,382**	**5.4%**
Acura	15,313	15,487	-1.1%	117,315	105,918	10.8%
Honda Division	140,178	151,551	-7.5%	937,501	936,464	0.1%
American Honda Motor Co.	**155,491**	**167,038**	**-6.9%**	**1,054,816**	**1,042,382**	**1.2%**
Infiniti	10,635	9,164	16.1%	85,348	77,043	10.8%
Nissan Division	122,716	125,224	-2.0%	915,358	883,274	3.6%
Nissan North America	**133,351**	**134,388**	**-0.8%**	**1,000,706**	**960,317**	**4.2%**
Hyundai division	72,012	70,003	2.9%	514,175	501,448	2.5%
Kia	58,897	54,667	7.7%	426,160	404,389	5.4%
Hyundai-Kia	**130,909**	**124,670**	**5.0%**	**940,335**	**905,837**	**3.8%**
Audi	18,794	17,101	9.9%	130,063	116,066	12.1%
Bentley	228	241	-5.4%	1,685	1,750	-3.7%
Lamborghini*	63	61	3.3%	504	488	3.3%
Porsche	5,008	4,540	10.3%	34,876	31,759	9.8%
VW division	32,332	35,181	-8.1%	238,074	244,878	-2.8%
VW Group Of America	**56,425**	**57,124**	**-1.2%**	**405,202**	**394,941**	**2.6%**
Subaru	**52,697**	**50,246**	**4.9%**	**375,632**	**333,968**	**12.5%**
BMW division	27,755	27,213	2.0%	223,348	211,004	5.9%
Mini	5,109	5,006	2.1%	40,560	34,969	16.0%
Rolls-Royce*	95	93	2.2%	760	739	2.8%
BMW Group	**32,959**	**32,312**	**2.0%**	**264,668**	**246,712**	**7.3%**
Mercedes-Benz	30,633	28,960	5.8%	238,827	221,473	7.8%
Smart USA	617	1,334	-53.7%	4,682	7,332	-36.1%
Daimler AG	**31,250**	**30,294**	**3.2%**	**243,509**	**228,805**	**6.4%**
Mazda	**29,938**	**31,305**	**-4.4%**	**216,091**	**216,973**	**-0.4%**
Mitsubishi	**8,289**	**6,786**	**22.1%**	**65,701**	**52,807**	**24.4%**
Jaguar	1,143	1,184	-3.5%	10,221	10,688	-4.4%
Land Rover	5,225	4,489	16.4%	42,548	35,318	20.5%
Jaguar Land Rover N.A.	**6,368**	**5,673**	**12.3%**	**52,769**	**46,006**	**14.7%**
Volvo Cars N.A.	**5,869**	**4,960**	**18.3%**	**40,854**	**39,184**	**4.3%**
Tesla*	**1,700**	**1,500**	**13.3%**	**13,600**	**12,000**	**13.3%**
Other***	**98**	**95**	**3.2%**	**780**	**756**	**3.2%**
U.S. LIGHT VEHICLE	**1,557,179**	**1,586,075**	**-0.6%**	**11,611,179**	**11,186,227**	**3.8%**

Table sorted by year-to-date sales

***Estimate**

****Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.**

*****Includes estimates for Aston Martin, Ferrari and Lotus**

	Aug. 2015	**Aug. 2014**	**% change**
Buick	22,281	22,145	0.6%
Cadillac	15,738	16,650	-5.5%
Chevrolet	183,098	185,930	-1.5%
GMC	49,363	47,700	3.5%
General Motors	**270,480**	**272,423**	**-0.7%**
Ford division	225,244	213,227	5.6%
Lincoln	8,636	8,146	6.0%
Ford Motor Co.	**233,880**	**221,373**	**5.7%**
Lexus	33,487	32,809	2.1%

Scion			
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Toyota/Scion	*190,894*	*213,291*	-10.5%
Toyota Motor Sales	**224,381**	**246,100**	**-8.8%**
Alfa Romeo	75	-	-
Chrysler Division	25,580	29,762	-14.1%
Dodge	42,386	49,895	-15.1%
Ram	49,439	46,594	6.1%
Fiat	3,388	3,362	0.8%
Jeep	80,804	68,766	17.5%
FCA US	***201,672***	***198,379***	**1.7%**
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Hyundai division	72,012	70,003	2.9%
Kia	58,897	54,667	7.7%
Hyundai-Kia	**130,909**	**124,670**	**5.0%**
Audi	18,794	17,101	9.9%
Bentley	228	241	-5.4%
Lamborghini*	63	61	3.3%
Porsche	5,008	4,540	10.3%
VW division	32,332	35,181	-8.1%
VW Group Of America	**56,425**	**57,124**	**-1.2%**
Subaru	**52,697**	**50,246**	**4.9%**
BMW division	27,755	27,213	2.0%
Mini	5,109	5,006	2.1%
Rolls-Royce*	95	93	2.2%
BMW Group	**32,959**	**32,312**	**2.0%**
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Smart USA	617	1,334	-53.7%
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Mazda	**29,938**	**31,305**	**-4.4%**
Mitsubishi	**8,289**	**6,786**	**22.1%**
Jaguar	1,143	1,184	-3.5%
Land Rover	5,225	4,489	16.4%
Jaguar Land Rover N.A.	**6,368**	**5,673**	**12.3%**
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Tesla*	**1,700**	**1,500**	**13.3%**
Other***	**98**	**95**	**3.2%**
U.S. LIGHT VEHICLE	**1,577,179**	**1,586,075**	**-0.6%**

***Estimate**

****Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.**

*****Includes estimates for Aston Martin, Ferrari and**

Lotus

Highlights

Mfgr. highest volume - August	**GM**	270,480	**Mfgr. highest volume - 8 mos.**	**GM**	2,048,537
Mfgr. gained the most volume - August	**Ford**	12,507	**Mfgr. gained the most volume - 8 mos.**	**Fiat Chrysler**	75,382
Mfgr. lost the most volume - August	**Toyota**	(21,719)	**Mfgr. lost the most volume - 8 mos.**	**Mazda**	(882)
Mfgr. highest % increase - August	**Mitsubishi**	22.1%	**Mfgr. highest % increase - 8 mos.**	**Mitsubishi**	24.4%
Mfgr. biggest % drop - August	**Toyota**	-8.8%	**Mfgr. biggest % drop - 8 mos.**	**Mazda**	-0.4%
Brand highest volume - August	**Ford**	225,244	**Brand highest volume - 8 mos.**	**Ford**	1,678,92
Brand gained the most volume - August	**Jeep**	12,038	**Brand gained the most volume - 8 mos.**	**Jeep**	94,553
Brand lost the most volume - August	**Toyota**	(20,106)	**Brand lost the most volume - 8 mos.**	**Dodge**	(62,760)
Brand highest % increase - August	**Mitsubishi**	22.1%	**Brand highest % increase - 8 mos.**	**Mitsubishi**	24.4%
Brand biggest % drop - August	**Smart**	-53.7%	**Brand biggest % drop - 8 mos.**	**Smart**	-36.1%

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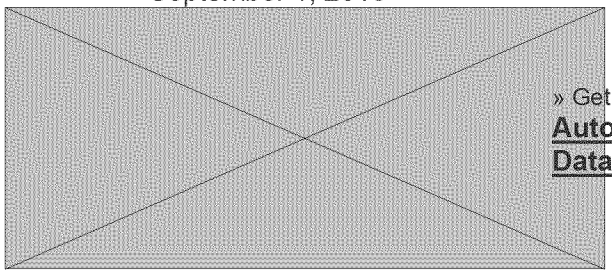
Automotive News
1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Tue 9/1/2015 9:38:34 PM
Subject: U.S. SALES REPORT: Ford's Aug. retail gains | Weak cars ding Honda, Toyota | GM dips | Hyundai, Kia records | Jeep drives FCA | Lexus nabs 2nd win, closes in on BMW | Why the momentum may last

September 1, 2015



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Ford's U.S. retail volume best since '06

Ford Motor Co. had its best retail-sales month since March 2006 in August, selling 183,467 vehicles in the U.S. Ford posted its highest F-series number of the year and gains of at least 20 percent for five crossover and SUV nameplates.

Toyota, Honda suffer from weak car deliveries

The declines in small and midsize car sales finally caught up to both Toyota and Honda in August. Toyota Motor Sales U.S.A. reported its August sales fell 8.8 percent from a year earlier to 224,381 vehicles, while American Honda Motor Co.'s sales dropped 6.9 percent to 155,491. Both companies suffered big declines in cars that negated increases in some light trucks.

Hyundai, Kia notch records on Santa Fe, Soul

Facing stock market turmoil and an unfriendly calendar, Korean siblings Hyundai and Kia still set monthly U.S. sales records in August on strong demand for crossovers. Hyundai reported selling 72,012 vehicles for the month, a 2.9 percent increase, as Kia claimed 58,897 units sold, up 7.7 percent.

Blogs

JESSE SNYDER

Why the mon coul last

Sales edge down but SAAR soars to 17.81 million

Nissan North America projects slight U.S. sales drop in August

Nissan North America projects slight U.S. sales drop in August as use of lower incentives offset strong performance by light trucks and, the Altima reaches a milestone with BMW. Sales rose 2.3%, less than year-to-date sales 13,487, including 1,148 of the new 364,400 NX SUV. the company has crossed that mark just eight months into the year.

WINNERS AND LOSERS

% change in sales among brands

	Winners	Aug.	Winners	8 mos.	Losers	Aug.	Losers	8 mos.
1	Mitsubishi	22.1%	1 Mitsubishi	24.4%	1 Smart	-53.7%	1 Smart	-36.1%
2	Volvo	18.3%	2 Jeep	20.5%	2 Scion	-37.0%	2 Scion	-22.1%
3	Jeep	17.5%	2 Land Rover	20.5%	3 Dodge	-15.1%	3 Dodge	-15.7%
4	Land Rover	16.4%	4 Mini	16.0%	4 Chrysler Division	-14.1%	4 Fiat	-11.6%
5	Infiniti	16.1%	5 Chrysler Division	14.0%	5 Toyota Division	-9.7%	5 Jaguar	-4.4%

WINNERS AND LOSERS

	Winners	Aug.
1	Mitsubishi	22.1%
2	Volvo	18.3%
3	Jeep	17.5%
4	Land Rover	16.4%
5	Infiniti	16.1%

	Winners	8 mos.
1	Mitsubishi	24.4%

2		
2	**Land Rover**	20.5%
4	**Mini**	16.0%
5	**Chrysler Division**	14.0%

	Losers	**Aug.**
1	**Smart**	-53.7%
2	**Scion**	-37.0%
3	**Dodge**	-15.1%
4	**Chrysler Division**	-14.1%
5	**Toyota Division**	-9.7%

	Losers	**8 mos.**
1	**Smart**	-36.1%
2	**Scion**	-22.1%
3	**Dodge**	-15.7%
4	**Fiat**	-11.6%
5	**Jaguar**	-4.4%

Top Selling Light Vehicles

	Aug.		**8 mos.**	
1	**Ford F series**	71,332	1 **Ford F series**	494,8(
2	**Chevrole Silverado**	54,977	2 **Chevrole Silverado**	387,17
3	**Ram pickup**	45,310	3 **Ram pickup**	294,0⁴
4	**Honda Accord**	40,931	4 **Toyota Camry**	291,8⁴
5	**Toyota Camry**	37,592	5 **Toyota Corolla**	252,1(
6	**Honda CR-V**	34,771	6 **Nissan Altima**	238,2(
7	**Nissan Altima**	32,327	7 **Honda Accord**	231,17
8	**Honda Civic**	32,031	8 **Honda CR-V**	229,57
9	**Toyota Corolla**	31,726	9 **Honda Civic**	221,47
10	**Toyota RAV4**	30,534	10 **Ford Fusion**	206,53

Top Selling Cars

	Aug.		**8 mos.**	
1	**Honda Accord**	40,931	1 **Toyota Camry**	291,8⁴
2	**Toyota Camry**	37,592	2 **Toyota Corolla**	252,1(
3	**Nissan Altima**	32,327	3 **Nissan Altima**	238,2(

4	Honda Civic		4	Honda Accord	
5	Toyota Corolla	31,726	5	Honda Civic	221,47
6	Ford Fusion	28,270	6	Ford Fusion	206,53
7	Hyundai Elantra	22,405	7	Hyundai Elantra	173,23
8	Hyundai Sonata	21,818	8	Chevrolet Cruze	163,93
9	Toyota Prius	17,757	9	Ford Focus	150,42
10	Chevrolet Malibu	17,553	10	Hyundai Sonata	141,55

Top Selling Light Trucks

		Aug.		8 mos.
1	Ford F series	71,332	1 Ford F series	494,8(
2	Chevrolet Silverado	54,977	2 Chevrolet Silverado	387,1
3	Ram pickup	45,310	3 Ram pickup	294,0
4	Honda CR-V	34,771	4 Honda CR-V	229,5
5	Toyota RAV4	30,534	5 Ford Escape	204,5
6	Ford Escape	28,870	6 Toyota RAV4	200,8
7	Nissan Rogue	27,665	7 Chevrolet Equinox	192,5(
8	Chevrolet Equinox	25,211	8 Nissan Rogue	188,1
9	Ford Explorer	23,671	9 Ford Explorer	169,4
10	GMC Sierra	21,241	10 GMC Sierra	141,8

Table sorted by year-to-date sales

	Aug. 2015	Aug. 2014	% change	8 mos. 2015	8 mos. 2014	% change
Buick	22,281	22,143	0.6%	149,386	153,298	-2.6%
Cadillac	15,738	16,650	-5.5%	110,791	114,008	-2.8%
Chevrolet	183,098	185,930	-1.5%	1,425,507	1,388,993	2.6%
GMC	49,363	47,700	3.5%	362,853	328,152	10.6%
General Motors	**270,480**	**272,423**	**-0.7%**	**2,048,537**	**1,984,451**	**3.2%**
Ford division	225,244	213,227	5.6%	1,678,929	1,637,666	2.5%
Lincoln	8,636	8,146	6.0%	65,284	60,531	7.9%
Ford Motor Co.	**233,880**	**221,373**	**5.7%**	**1,744,213**	**1,698,197**	**2.7%**
Lexus	33,487	32,809	2.1%	222,151	198,831	11.7%
Scion	3,895	6,186	-37.0%	32,691	41,949	-22.1%
Toyota Division	186,999	207,105	-9.7%	1,418,160	1,386,729	2.3%
Toyota/Scion	*190,894*	*213,291*	-10.5%	*1,450,851*	*1,428,678*	1.6%
Toyota Motor Sales	**224,381**	**246,100**	**-8.8%**	**1,673,002**	**1,627,509**	**2.8%**
Alfa Romeo	75	-	-	443	-	-

Chrysler Division						
Dodge	42,386	49,895	-15.1%	337,177	399,937	-15.7%
Ram	49,439	46,594	6.1%	318,542	298,650	6.7%
Fiat	3,388	3,362	0.8%	28,421	32,141	-11.6%
Jeep	80,804	68,766	17.5%	555,709	461,156	20.5%
FCA US	***201,672***	***198,379***	**1.7%**	***1,461,842***	***1,386,169***	**5.5%**
Ferrari*	177	176	0.6%	1,416	1,406	0.7%
Maserati	1,245	1,233	1.0%	7,506	7,807	-3.9%
Fiat Chrysler Automobiles**	**203,094**	**199,788**	**1.7%**	**1,470,764**	**1,395,382**	**5.4%**
Acura	15,313	15,487	-1.1%	117,315	105,918	10.8%
Honda Division	140,178	151,551	-7.5%	937,501	936,464	0.1%
American Honda Motor Co.	**155,491**	**167,038**	**-6.9%**	**1,054,816**	**1,042,382**	**1.2%**
Infiniti	10,635	9,164	16.1%	85,348	77,043	10.8%
Nissan Division	122,716	125,224	-2.0%	915,358	883,274	3.6%
Nissan North America	**133,351**	**134,388**	**-0.8%**	**1,000,706**	**960,317**	**4.2%**
Hyundai division	72,012	70,003	2.9%	514,175	501,448	2.5%
Kia	58,897	54,667	7.7%	426,160	404,389	5.4%
Hyundai-Kia	**130,909**	**124,670**	**5.0%**	**940,335**	**905,837**	**3.8%**
Audi	18,794	17,101	9.9%	130,063	116,066	12.1%
Bentley	228	241	-5.4%	1,685	1,750	-3.7%
Lamborghini*	63	61	3.3%	504	488	3.3%
Porsche	5,008	4,540	10.3%	34,876	31,759	9.8%
VW division	32,332	35,181	-8.1%	238,074	244,878	-2.8%
VW Group Of America	**56,425**	**57,124**	**-1.2%**	**405,202**	**394,941**	**2.6%**
Subaru	**52,697**	**50,246**	**4.9%**	**375,632**	**333,968**	**12.5%**
BMW division	27,755	27,213	2.0%	223,348	211,004	5.9%
Mini	5,109	5,006	2.1%	40,560	34,969	16.0%
Rolls-Royce*	95	93	2.2%	760	739	2.8%
BMW Group	**32,959**	**32,312**	**2.0%**	**264,668**	**246,712**	**7.3%**
Mercedes-Benz	30,633	28,960	5.8%	238,827	221,473	7.8%
Smart USA	617	1,334	-53.7%	4,682	7,332	-36.1%
Daimler AG	**31,250**	**30,294**	**3.2%**	**243,509**	**228,805**	**6.4%**
Mazda	**29,938**	**31,305**	**-4.4%**	**216,091**	**216,973**	**-0.4%**
Mitsubishi	**8,289**	**6,786**	**22.1%**	**65,701**	**52,807**	**24.4%**
Jaguar	1,143	1,184	-3.5%	10,221	10,688	-4.4%
Land Rover	5,225	4,489	16.4%	42,548	35,318	20.5%
Jaguar Land Rover N.A.	**6,368**	**5,673**	**12.3%**	**52,769**	**46,006**	**14.7%**
Volvo Cars N.A.	**5,869**	**4,960**	**18.3%**	**40,854**	**39,184**	**4.3%**
Tesla*	**1,700**	**1,500**	**13.3%**	**13,600**	**12,000**	**13.3%**
Other***	**98**	**95**	**3.2%**	**780**	**756**	**3.2%**
U.S. LIGHT VEHICLE	**1,557,179**	**1,586,075**	**-0.6%**	**11,611,179**	**11,186,227**	**3.8%**

Table sorted by year-to-date sales

*Estimate

**Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.

***Includes estimates for Aston Martin, Ferrari and Lotus

	Aug. 2015	Aug. 2014	% change
Buick	22,281	22,143	0.6%
Cadillac	15,738	16,650	-5.5%
Chevrolet	183,098	185,930	-1.5%
GMC	49,363	47,700	3.5%
General Motors	**270,480**	**272,423**	**-0.7%**
Ford division	225,244	213,227	5.6%
Lincoln	8,636	8,146	6.0%
Ford Motor Co.	**233,880**	**221,373**	**5.7%**
Lexus	33,487	32,809	2.1%

Scion			
Toyota Division	186,999	207,105	-9.7%
Toyota/Scion	*190,894*	*213,291*	-10.5%
Toyota Motor Sales	**224,381**	**246,100**	**-8.8%**
Alfa Romeo	75	-	-
Chrysler Division	25,580	29,762	-14.1%
Dodge	42,386	49,895	-15.1%
Ram	49,439	46,594	6.1%
Fiat	3,388	3,362	0.8%
Jeep	80,804	68,766	17.5%
FCA US	***201,672***	***198,379***	**1.7%**
Ferrari*	177	176	0.6%
Maserati	1,245	1,233	1.0%
Fiat Chrysler Automobiles**	**203,094**	**199,788**	**1.7%**
Acura	15,313	15,487	-1.1%
Honda Division	140,178	151,551	-7.5%
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Infiniti	10,635	9,164	16.1%
Nissan Division	122,716	125,224	-2.0%
Nissan North America	**133,351**	**134,388**	**-0.8%**
Hyundai division	72,012	70,003	2.9%
Kia	58,897	54,667	7.7%
Hyundai-Kia	**130,909**	**124,670**	**5.0%**
Audi	18,794	17,101	9.9%
Bentley	228	241	-5.4%
Lamborghini*	63	61	3.3%
Porsche	5,008	4,540	10.3%
VW division	32,332	35,181	-8.1%
VW Group Of America	**56,425**	**57,124**	**-1.2%**
Subaru	**52,697**	**50,246**	**4.9%**
BMW division	27,755	27,213	2.0%
Mini	5,109	5,006	2.1%
Rolls-Royce*	95	93	2.2%
BMW Group	**32,959**	**32,312**	**2.0%**
Mercedes-Benz	30,633	28,960	5.8%
Smart USA	617	1,334	-53.7%
Daimler AG	**31,250**	**30,294**	**3.2%**
Mazda	**29,938**	**31,305**	**-4.4%**
Mitsubishi	**8,289**	**6,786**	**22.1%**
Jaguar	1,143	1,184	-3.5%
Land Rover	5,225	4,489	16.4%
Jaguar Land Rover N.A.	**6,368**	**5,673**	**12.3%**
Volvo Cars N.A.	**5,869**	**4,960**	**18.3%**
Tesla*	**1,700**	**1,500**	**13.3%**
Other***	**98**	**95**	**3.2%**
U.S. LIGHT VEHICLE	**1,577,179**	**1,586,075**	**-0.6%**

***Estimate**

****Fiat S.p.A. purchased the remaining 41.46% stake in Chrysler Group from the UAW's VEBA Trust on Jan. 20, 2014.**

*****Includes estimates for Aston Martin, Ferrari and**

Lotus

Highlights

Mfgr. highest volume - August	**GM**	270,480	**Mfgr. highest volume - 8 mos.**	**GM**	2,048,537
Mfgr. gained the most volume - August	**Ford**	12,507	**Mfgr. gained the most volume - 8 mos.**	**Fiat Chrysler**	75,382
Mfgr. lost the most volume - August	**Toyota**	(21,719)	**Mfgr. lost the most volume - 8 mos.**	**Mazda**	(882)
Mfgr. highest % increase - August	**Mitsubishi**	22.1%	**Mfgr. highest % increase - 8 mos.**	**Mitsubishi**	24.4%
Mfgr. biggest % drop - August	**Toyota**	-8.8%	**Mfgr. biggest % drop - 8 mos.**	**Mazda**	-0.4%
Brand highest volume - August	**Ford**	225,244	**Brand highest volume - 8 mos.**	**Ford**	1,678,92
Brand gained the most volume - August	**Jeep**	12,038	**Brand gained the most volume - 8 mos.**	**Jeep**	94,553
Brand lost the most volume - August	**Toyota**	(20,106)	**Brand lost the most volume - 8 mos.**	**Dodge**	(62,760)
Brand highest % increase - August	**Mitsubishi**	22.1%	**Brand highest % increase - 8 mos.**	**Mitsubishi**	24.4%
Brand biggest % drop - August	**Smart**	-53.7%	**Brand biggest % drop - 8 mos.**	**Smart**	-36.1%

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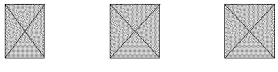

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 9/2/2015 1:16:53 PM
Subject: A.M. NEWSCAST: Aug. sales winners, losers | Lexus luxury win | Barra's Volt frustration | New Hyundai, Nissan U.S. sales chiefs | More time to run VW | Oprah gets a car, too

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Wed 9/2/2015 1:17:14 PM
Subject: A.M. NEWSCAST: Aug. sales winners, losers | Lexus luxury win | Barra's Volt frustration | New Hyundai, Nissan U.S. sales chiefs | More time to run VW | Oprah gets a car, too

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To: Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]
From: Kaul, Meetu
Sent: Wed 9/2/2015 2:55:52 PM
Subject: Contact info

Josh,

I'm putting together a contact list for the VW case.

Can you send me:

(1) Ben's phone number and email

(2) Karen's phone number and confirm her title is assistant chief, special litigation and projects, EES

(3) Beth's phone and email and confirm her title is also trial attorney?

And Leslie's title is "senior attorney" still, correct?

Thanks

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/2/2015 3:35:02 PM
Subject: Do you have Ex. 7 email? is it ' Ex. 7

For the VW contact list.

Thanks

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Wed 9/2/2015 3:35:35 PM
Subject Ex. 7

Ex. 7

From: Kaul, Meetu
Sent: Wednesday, September 02, 2015 11:35 AM
To: Belser, Evan
Subject: Ex. 7

For the VW contact list.

Thanks

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Ex. 7 (EEO)
Location: Conf Call (El Monte)
Importance: Normal
Subject: VW CARB Conf Call (Pacific Time)
Start Date/Time: Thur 9/3/2015 7:00:00 PM
End Date/Time: Thur 9/3/2015 10:00:00 PM

.....
,,,,,,,
--Please Note Pacific Time—

Ex. 7

.....

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

Ex. 7 Auburn Hills) English (United States)
Auburn Hills) English (United States)
Auburn Hills) English (United States)
Auburn Hills) English (United States)

Find a local number
Conference ID: Ex. 7
Forgot your dial-in PIN? | Help

.....

From: Ex. 7
Location: Conf Call (El Monte) - RM. N-120 AA
Importance: Normal
Subject: VW CARB Conf Call (Pacific Time)
Start Date/Time: Thur 9/3/2015 7:00:00 PM
End Date/Time: Thur 9/3/2015 10:00:00 PM

.....
,,,,,,,
--Please Note Pacific Time—
Ex. 7 asked for a conference line to be provided for the VW-CARB meeting scheduled for 3-Sept in El Monte 12-3pm Pacific time. Please call Ex. 6 if there are any difficulties with the line.
Thank you,
Ex. 7

.....

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

+1 (248) 754-6400 (Auburn Hills) English (United States)
+1 (855) 858-8080 (Auburn Hills) English (United States)
+1 (248) 630-0170 (Auburn Hills) English (United States)
+1 (248) 754-5055 (Auburn Hills) English (United States)
Find a local number
Conference ID: Non-Responsive
Forgot your dial-in PIN? | Help

.....

From: Bunker, Byron
Location: Conf Call (El Monte)
Importance: Normal
Subject: Accepted: VW CARB Conf Call (Pacific Time)
Start Date/Time: Thur 9/3/2015 7:00:00 PM
End Date/Time: Thur 9/3/2015 10:00:00 PM

From: Ex. 7
Required Attendees: Ex. 7
Ex. 7
Optional Attendees: Ex. 7
Ex. 7 Bunker, Byron <bunker.byron@epa.gov> (bunker.byron@epa.gov); wehrly.linc@epa.gov; Ex. 7
Ex. 7
Location: ARB Conference Room EXC (AN1); CR620
Importance: Normal
Subject: VW meeting
Start Date/Time: Thur 9/3/2015 7:00:00 PM
End Date/Time: Thur 9/3/2015 11:00:00 PM

~~Lesleigh has booked CR620, Thanks Lesleigh!~~
Annette is in Sacto

Conference line
800-988-9755

Non-Responsive

From: Bunker, Byron
Location: ARB Conference Room EXC (AN1); CR620
Importance: Normal
Subject: Accepted: FW: VW meeting
Start Date/Time: Thur 9/3/2015 7:00:00 PM
End Date/Time: Thur 9/3/2015 11:00:00 PM

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: JJS home [jjsmymail@ameritech.net]
From: Wright, DavidA
Sent: Wed 9/2/2015 5:15:34 PM
Subject: RE: A Hot Rod D Wright could like

The only problem is I clicked on the link for the body kit, and the interwebs told me that page was no longer available, so, your supplier is apparently not making the 1927 speedway anymore.

From: Snyder, Jim
Sent: Wednesday, September 02, 2015 1:13 PM
To: Wright, DavidA
Cc: JJS home
Subject: RE: A Hot Rod D Wright could like

Doesn't that look like a fun EV? I think I'll forward this to my EV fan car buddies. Maybe I can get one to trade in their gas roadster for this.

From: Wright, DavidA
Sent: Wednesday, September 02, 2015 1:08 PM
To: Snyder, Jim
Subject: RE: A Hot Rod D Wright could like

God damned that is freaking gorgeous.

From: Snyder, Jim
Sent: Wednesday, September 02, 2015 12:31 PM
To: Wright, DavidA
Subject: FW: A Hot Rod D Wright could like

This DIY is much more affordable than Paul's 30K turnkey. Body/chassis is only $3300 + surplus drive system.

From: JIM [mailto:jjsmymail@ameritech.net]
Sent: Tuesday, September 01, 2015 8:32 PM
To: Snyder, Jim
Subject: A Hot Rod D Wright could like

This was in a forum on "have-you-ever-built-a-hot-rod-tell-us-your-experiences" Looks like a Hot Rod but read the description.

A few months of grunting, some lead acid batteries, a VW transmission/front suspension, an electric motor and controller- and then a T bucket roadster miraculously appeared.

$3,500 kit http://www.speedwaymotors.com/Speedway-1927-...

This is my buddy's.

144 V Wisconsin Electric-three Phase, Curtis Controller, looking at upgrading to LiPolys with the right supplier.

The roadster is pretty dang fast, essentially it's a big electric go cart. The VW tranny is pretty

much only useful in second or third gear with all that torque.

Batteries are dispersed for a 45/55 weight distribution. Range is about 50-60 miles with the lead acids. The plan was to make it fun and not too heavy at the cost of range. With LiPolys range could easily be tripled with a whole lot less weight.

That is awesome! And holy moly that's cheap for a rolling chassis with body!

To: Ex. 7 Alex Keros (alexander.keros@gm.com)[alexander.keros@gm.com]; Bill Elrick[belrick@CAFCP.org]; Fred Joseck (fred.joseck@ee.doe.gov)[fred.joseck@ee.doe.gov]; Jerome Gregeois (jgregeois@hatci.com)[jgregeois@hatci.com]; MIKULIN, JOHN[MIKULIN.JOHN@EPA.GOV]; Justin Ward (justin.ward@tema.toyota.com)[justin.ward@tema.toyota.com]; Lance Atkins (lance.atkins@nissan-usa.com)[lance.atkins@nissan-usa.com]; mmiyasato@aqmd.gov[mmiyasato@aqmd.gov]; McKinney, Jim@Energy[Jim.McKinney@energy.ca.gov]; Robert Bienenfeld (Robert_Bienenfeld@ahm.honda.com)[Robert_Bienenfeld@ahm.honda.com]; Ronald Grasman (ronald.grasman@daimler.com)[ronald.grasman@daimler.com]; Ex. 7 Ex. 7 Thorsten Wesse (Thorsten.Wesse@afcc-auto.com)[Thorsten.Wesse@afcc-auto.com]; Tyson Eckerle (tyson.eckerle@gov.ca.gov)[tyson.eckerle@gov.ca.gov]; Amy Lilly (alilly@hatci.com)[alilly@hatci.com]; Ex. 7 Andreas Truckenbrodt (andreas.truckenbrodt@truckenbrodts.com)[andreas.truckenbrodt@truckenbrodts.com]; Ex. 7 Ex. 7 afournier@baaqmd.gov[afournier@baaqmd.gov]; Bob Cassidy (robert.cassidy@nissan-usa.com)[robert.cassidy@nissan-usa.com]; Brandi Gonzales[bgonzales@CAFCP.org]; Byung Ki Ahn (bk.ahn@hyundai.com)[bk.ahn@hyundai.com]; Ex. 7 Grundler, Christopher[grundler.christopher@epa.gov]; Chris White[cwhite@CAFCP.org]; Dean Kato (dean@intereco.com)[dean@intereco.com]; Ex. 7 Ex. 7 Ex. 7 Ex. 7 Ex. 7 Geri Yoza (Geri_yoza@toyota.com)[Geri_yoza@toyota.com]; Jared Farnsworth (jared.farnsworth@tema.toyota.com)[jared.farnsworth@tema.toyota.com]; Jason Marcinkoski (jason.marcinkoski@ee.doe.gov)[jason.marcinkoski@ee.doe.gov]; Ex. 7 Ex. 7 John Juriga (jjuriga@hatci.com)[jjuriga@hatci.com]; Juergen Friedrich (juergen.friedrich@daimler.com)[juergen.friedrich@daimler.com]; Kevin Lee (kslee@hatci.com)[kslee@hatci.com]; Kiho Yoo (k.u@hyundai-motor.com)[k.u@hyundai-motor.com]; Linda Carrizosa[lcarrizosa@cafcp.org]; Lisa Mirisola (lmirisola@aqmd.gov)[lmirisola@aqmd.gov]; Mark S. Torigian Esq (Mtorigian@hatci.com)[Mtorigian@hatci.com]; Matt McClory (matt.mcclory@tema.toyota.com)[matt.mcclory@tema.toyota.com]; Matthew Forrest (matthew.forrest@daimler.com)[matthew.forrest@daimler.com]; Nico Bouwkamp[nbouwkamp@cafcp.org]; stephen_ellis@ahm.honda.com[stephen_ellis@ahm.honda.com]; Ex. 7 Sunita Satyapal Ph. D. (Sunita.Satyapal@ee.doe.gov)[Sunita.Satyapal@ee.doe.gov]; Wysor, Tad[wysor.tad@epa.gov]; Takehito Yokoo (takehito.yokoo@tema.toyota.com)[takehito.yokoo@tema.toyota.com]; Tiger Jeong (tigerjeong@hyundai.com)[tigerjeong@hyundai.com]; Tim Olson (tolson@energy.state.ca.us)[tolson@energy.state.ca.us]; catherine.kim@daimler.com[catherine.kim@daimler.com]; Kaori Alarid (kaori.alarid@tema.toyota.com)[kaori.alarid@tema.toyota.com]; Ex. 7 Ex. 7 Melanie Hobenshield (melanie.hobenshield@afcc-auto.com)[melanie.hobenshield@afcc-auto.com]; Pat Krayser[pkrayser@aqmd.gov]
From: Linda Carrizosa
Sent: Wed 9/2/2015 5:25:52 PM
Subject: Dialin information for CaFCP ST Phone meeting, Sept 2, 2015, at 10:30am pST

Hello Everyone,

Please see the update dial in information. Also updated on outlook inivte.

Please join:

Date and Time:	Sept 2, 10:30am – 12:00pm PST
Conference Line:	(916) 376-8968 *(use CaFCP line, not Startmeeting line)*
Meeting Wall:	https://www.startmeeting.com
MeetingID:	**Non-Responsive**

Linda Carrizosa | Administrative Assistant | CaFCP

D 916 371 2870 | F 916 375 8005 | lcarrizosa@cafcp.org

3300 Industrial Blvd., Ste. 1000, West Sacramento, CA 95691 | www.cafcp.com

To: Wehrly, Linc[wehrly.linc@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
Cc: Ex. 7 @vw.com]
From: Ex. 7 (EEO)
Sent: Wed 9/2/2015 6:51:15 PM
Subject: Conf Call for VW-CARB Meeting

Hello Linc, Byron,

I had a note from Ex. 7 that CARB has already set up a conf call number for tomorrow's meeting. Sorry for the confusion. Please use their number instead of the one I sent earlier for tomorrow's call. If you have any questions please let me know.

Thanks

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326
Phon
Cell:
FAX:
E-Ma Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 9/2/2015 8:25:56 PM
Subject: DAILY: Bill Ford says health care co-op possible in UAW talks | Maserati dealer sues factory, alleging padded sales | Nissan exec Mohnke adds U.S. sales duties | VW extends Winterkorn's contract

Today's most read story

Jeep Wrangler to stay in Toledo, Cherokee leaving, Wrangler-based pickup coming

September 2, 2015

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Bill Ford says health care co-op possible in UAW talks

Ford Motor Executive Chairman Bill Ford said the company is considering a health-care co-op, an issue the UAW has raised in negotiations on a new contract.

Maserati dealer sues factory, alleging padded sales

A Maserati dealer has sued Maserati North America, saying the auto company insisted the dealership misrepresent sales, reporting 2014 vehicle sales as much as quadruple what they actually were, and discriminated against dealers who refused to participate, according to a complaint filed Friday, Aug. 28.

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Jeep Wrangler to stay in Toledo, Cherokee leaving, Wrangler-based pickup coming GM's Duramax V-8

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Nissan marketing exec Mohnke adds U.S. sales duties

Nissan North America's chief marketing officer Dan Mohnke will add U.S. sales to his responsibilities beginning today, the automaker said in a news release.

Be the #1 Nissan dealer in your local market competition, while identifying key profit opportunities with a FREE enrollment to PowerDealer. Visit MyPowerDealer.com to learn more.

VW plans to extend CEO Winterkorn's contract until 2018

Volkswagen plans to extend the contract of CEO Martin Winterkorn until the end of 2018, a victory for the executive after he clashed with former Chairman Ferdinand Piech.

VIDEO

Nissan's Z to be a crossover?

Nissan teases its production plans for the Z sports car, where it now seems likely that the next Z car will be a crossover.

Hyundai brings back Nissan's Hatami as U.S. sales chief

Former Saab CEO charged with giving false testimony

2015 FRANKFURT AUTO SHOW

Mercedes S-class cabrio will bow in Frankfurt

AutoNation August sales drop 5% on calendar quirk

Average U.S. new-vehicle mpg falls in August

GM expects to be profitable in India in 5 years

Navistar reports a surprise Q3 loss amid U.S. investigation

German carmakers win U.S. antitrust approval to buy Nokia maps

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Why the momentum could last

BLOG: RICHARD TRUETT

Is there room under the Blue Oval for Ranger, Bronco and Troller in U.S.?

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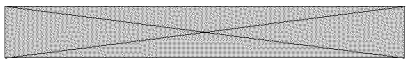
EVENTS

» Sept. 22 - NY Marketing Seminar

» Oct. 1 - Automobilwoche Kongress

» Oct. 14 - Best Dealerships To Work For

» Jan. 12 - Automotive News World Congress



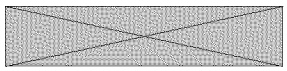
WEBINARS

» Sept. 10 at 2pm ET - Buyer Detection
by Outsell

» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive



» F&I Practices: How to Stay Out of Jail!

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customerservice@autonews.com

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE Member Connection
Sent: Thur 9/3/2015 10:04:42 AM
Subject: Open Forum Digest for Wednesday September 2, 2015

[redacted]

Open Forum

Post New Message Online Post New Message via Email

Sep 2, 2015

started 2 days ago, Peter Gross (10 replies)

OBD Data monitoring Dingles

1As noted in the thread pointed out by Jerry: ... Robert Gruszczynski

2As your movements can already be tracked by your... E Timothy Pawl

started 2 days ago, William Novacek (5 replies)

Ductile Iron Casting

3In a former life I cast a lot of iron for

pump... Edward Blessman

4 Ductile Iron is also called Gray or Grey Iron Peter Vorum

started 4 days ago, Richard Gilbert (19 replies)

Why Old People Drive into Shops

5 What happens when you accidentally bump this... Steven Gillespie

6 Hello, Jerry Thank you for replying to my... Stephen Robertson

7 I would suggest that the smart pedal connect a... Jerry Alcone

started 6 days ago, Jerry Alcone (21 replies)

Reducing under hood temperatures

8 Jerry Do not try to use the wheel to pump... Gregory Green

9 Thanks Gregory I was thinking of pumping air out... Jerry Alcone

started 6 days ago, Serdar Uckun (7 replies)

Shackle Load Monitoring Design Challenge

1. What is an "inverting tube" in this context? ... William Coltharp

top next

1. Re: OBD Data monitoring Dingles

Reply All Online | Reply All Email

Robert Gruszczynski

http://boston.cbslocal.com/2015/05/18/i-team-drivers-say-insurance-device-put-them-in-danger-on-the-road/

http://www.kirotv.com/news/news/america family-insurance-recalls-vehicle-usage-mo/ngfp4/

http://www.theverge.com/2015/8/11/9130 hack-corvette-brakes-insurance-dongle

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2. Re: OBD Data monitoring Dingles

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E Timothy Pawl

As your movements can already be tracked by your cell phone. The solution to protecting your freedom from tracking is to purchase a vehicle from time frame before onboard computers, and leave your cell phone at home. Certain European cities have introduced laws to eliminate cars older than 9 years old, in the name of reduced pollution and improved fuel economy, but it also means *allowing* only vehicles that can be tracked and electronically disabled. Is the proposed introduction of higher ethanol percentage fuels, which play havoc on older vehicles fuel systems, another way any government can try to eliminate the non-trackable types of vehicles? Your "Freedom of Movement" is one of the rights implied by the original creation of

the United States, that you could move about the continent without requiring passport from state to state. We hear a lot of rhetoric about "Gun Control" , but we need to hear about "Car Control", our right to drive cars. Beware of anyone who wants to take away your right to drive your "Antique car".

E Timothy Pawl

West Bloomfield MI

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3. Re: Ductile Iron Casting

-

Edward Blessman

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4. Re: Ductile Iron Casting

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-

Peter Vorum

'

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5. Re: Why Old People Drive into Shops

-

Steven Gillespie

'

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6. Re: Why Old People Drive into Shops

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Stephen Robertson

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7. Re: Why Old People Drive into Shops

-

Jerry Alcone

'

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8. Re: Reducing under hood temperatures

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-

Gregory Green

I

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9. Re: Reducing under hood temperatures

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-

Jerry Alcone

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10 Re: Shackle Load Monitoring Design Challenge

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William Coltharp

What is an "inverting tube" in this context?

William Coltharp
President
Coltharp Engineering Associates Inc
Austin TX

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pidgeon.bill@epa.gov. To change your subscriptions, go to My Subscriptions. To unsubscribe from this community discussion, go to Unsubscribe.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 9/3/2015 12:38:54 PM
Subject: A.M. NEWSCAST: Tesla Model X coming Sept. 29 | Dealer sues Maserati | BMW, Audi, Benz clear hurdle in 'Here' buy | Honda recalls '15 Fit | VW's mini Darth Vader, 4 years later

September 3, 2015

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Update on a VW star »

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customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 9/3/2015 12:39:13 PM
Subject: A.M. NEWSCAST: Tesla Model X coming Sept. 29 | Dealer sues Maserati | BMW, Audi, Benz clear hurdle in 'Here' buy | Honda recalls '15 Fit | VW's mini Darth Vader, 4 years later

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customerservice@autonews.com

From: Bunker, Byron
Required Attendees: Brooks, Phillip
Location: Byron will call Phil
Importance: Normal
Subject: OECA/OTAQ coordination call
Start Date/Time: Thur 9/3/2015 4:30:00 PM
End Date/Time: Thur 9/3/2015 5:00:00 PM

Agenda:

1) Non-Responsive
2) VW
3) Non-Responsive

From: Bunker, Byron
Required Attendees: Brooks, Phillip
Location: Byron will call Phil
Importance: Normal
Subject: OECA/OTAQ coordination call
Start Date/Time: Thur 9/3/2015 4:30:00 PM
End Date/Time: Thur 9/3/2015 5:00:00 PM

Agenda:

1) Aftermarket Catalysts
2) VW
3) Portable Fuel Containers - test fuels

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Thur 9/3/2015 1:54:15 PM
Subject: RE: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM
VW_Group_2016 FE Guide-all rel dates-no-sales-8-20-2015.xlsx

Richard,

The 2016 e-Golf is posted on the web---it didn't have any errors. I sent you the data on 8/20/2015 for your review for the 2016 Printed Guide---copy attached. It's in a different tab from the conventional vehicles.

Dave

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, September 03, 2015 7:35 AM
To: Good, David
Subject: RE: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Hi Dave;

I noticed that I have not seen the BEV Volkswagen e-Golf on your spreadsheet listing since the end of July. Ex. 4 - CBI

Ex. 4 - CBI

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, September 02, 2015 5:28 PM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Subject: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Richard,

Per your voicemail. **Ex. 4 - CBI**

Dave

2010 and Later Electric Vehicles - data in EPA's Verify data base - plus all

(Not Confidential)

2016 Model Year:

EPA Comments	Model Type Information							
EPA comm	VERIFY co	Model Yr	Mfr Name	Division	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
BEV;		2016	Volkswage	Volkswagee	e-Golf	VGA	86	0.0	
BEV;		2016	[Tested in the B-Mode (maximum regenerative braking mode)]						

(Sorted by Division Name)

-electric driving range information

D.Good

	Charge Depleting Information (Electricity Operation)								
Trans as I	City FE (G	Hwy FE (C	Comb FE	City Unad	Hwy Unad	Comb Una	City Unrd	Hwy Unrd	Comb Unr
				2016 Volkswagen e-Golf					
Auto(A1)	126	105	116	179.3	150.4	165.03	125.5	105.3	115.521
Auto(A1)	27	32	29	18.7987	22.4118	20.4246	26.8544	32.0146	29.1765

Charge Depleting Information (Electricity Operation)

For 20 Fuel	Air Aspir	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears	Trans Loc	Trans Cre	Drive Sys
			A	Automatic		1Y	N		F
			A	Automatic		1Y	N		F

									Vehicle Information
Drive Des	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag	Fuel Unit -	Fuel Unit I	Gas Guzzl	Gas Guzzl
2016 Volkswagen e-Golf									
2-Wheel Drive, Front			83	EL	Electricity	MPG	miles per g	N	Not exempt
2-Wheel Drive, Front			83	EL	Electricity	KW-HR/10	kilowatt-h	N	Not exempt

Vehicle Information			Ann Fuel Cost		MF2 Conform	
2Dr Pass 2Dr Lugg 4Dr Pass 4Dr Lugg Htchbk Partchbk Lu			Annual Fu	EPA Calcu	Comment	City2 FE (
				2016 Volkswagen e-Golf		
	91	17	550	550	rerun for battery pack set to	
	91	17	550	550	rerun for battery pack set to	

o Electric Vehicles)	Fuel 2 Information (Not Aplicable to Electric Vehicles)
Annual Fuel1 - Annual fuel cost error. Please revise. Verify.	
Hwy2 Fuel Comb2 FuCity2 UnaHwy2 UnaComb2 UrCity2 UnrHwy2 UnrCmb2 Unr Range2 - Fuel2 Usa	
one	
one	

le to Electric Vehicles)	General Information
Fuel2 User Fuel2 Unrl Fuel2 Unrl Fuel2 AnnCity CO2 IHwy CO2 Comb CO2 Fuel2 EPA	Descripto Intake Val
2016 Volkswagen e-Golf	

General Information					General Electric V		
Exhaust V	Carline Cl	Carline Cl	Car/Truck	Calc Appr	Release D	EPA FE La	Unique La	Label Rec
								2016 Volkswagen
	4	Compact C	car	Electric Ve	8/17/2015	18721	N	N
	4	Compact C	car	Electric Ve	8/17/2015	18721	N	N

Relabel	Relabel D	Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve
e-Golf									
		N	N						
		N	N						

Engine, Motor/Generator, Battery Information, etc.

General Electric Vehicle Information - Engine, Motor/Generator, Battery Information, etc.

Var Valve	Energy St	Energy St	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Energ	Batt Spec	Batt Charg
				2016 Volkswagen e-Golf					
	Battery(s)		1	Lithium Ion		363	75	76.1	Off-Board
	Battery(s)		1	Lithium Ion		363	75	76.1	Off-Board

Comment	# Capacit	Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell [	Usable H2	Fuel Cell (	HEV-EV C
		Electrical Regen Brake		Front Whe	Y				
		Electrical Regen Brake		Front Whe	Y				

General Electric Vehicle Information - Engine, Motor/Generator, Battery Informatio									
# Drive Mo	Motor Ger	Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board
		2016 Volkswagen e-Golf							
1	Other	Synchron M	85				N		Y
1	Other	Synchron M	85				N		Y

enerator, Battery Information, etc.

Canless VOM Viscosi	Capable (Y or N)	Stop/Start	Stop/Start	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
									2016 Volkswagen
	N	No							
	N	No							

		FE & GHG Ratings		#1 Smog Rating Test Group	
[illegible] EPA Calcul		FE Rating (GHG Ratin	GHG 1-10	#1 Smog R	#1 Mfr Sm #1 EPA Sm
e-Golf					
		10	10	GVGAV00.	10
		10	10	GVGAV00.	10

ng Test Group	#2 Smog Rating Test Group	#3 Smog Rating Test Group	#4 Smog Rating Test Group
		#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay	#4 Smog R

2016 Volkswagen e-Golf

#4 Smog Rating Test Group	You Save/You Spend	Gasoline CO2			PHEV	Battery Charge Ti
[illegible]	$ You Save	$ You Spe	City CO2 R	Hwy CO2 F	Comb CO2	CO2-PHEV	240V Char
						2016 Volkswagen
	6250	0	0	0		3.7
	6250	0	0	0		3.7

me	PHEV Total Range	PHEV Composite MPG			Electric Driving Range		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	City Range	Hwy Range	Comb Range as shown on FE Label (mi
e-Golf							
					88.9	75.2	83
					88.9	75.2	83

les)

EPA comm	VERIFY cc	Model Yr (Mfr Name	Division (t	Carline	Verify Mfr	Index (Mo	Eng Displ	# Cyl
		2016 Volkswage	Audi	A3	VGA	36	1.8	4
		2016 Volkswage	Audi	A3 Cabriol	VGA	37	1.8	4
		2016 Volkswage	Audi	A3 Cabriol	VGA	39	2.0	4
		2016 Volkswage	Audi	A3 quattro	VGA	38	2.0	4
		2016 Volkswage	Audi	A4	VGA	51	2.0	4
		2016 Volkswage	Audi	A4 quattro	VGA	33	2.0	4
		2016 Volkswage	Audi	A4 quattro	VGA	49	2.0	4
		2016 Volkswage	Audi	A5 Cabriol	VGA	35	2.0	4
		2016 Volkswage	Audi	A5 quattro	VGA	34	2.0	4
		2016 Volkswage	Audi	A5 quattro	VGA	50	2.0	4
		2016 Volkswage	Audi	A6	VGA	16	2.0	4
		2016 Volkswage	Audi	A6 quattro	VGA	15	2.0	4
		2016 Volkswage	Audi	A6 quattro	VGA	2	3.0	6
Diesel;		2016 Volkswage	Audi	A6 quattro	VGA	3	3.0	6
		2016 Volkswage	Audi	A7 quattro	VGA	1	3.0	6
Diesel;		2016 Volkswage	Audi	A7 quattro	VGA	4	3.0	6
Diesel;		2016 Volkswage	Audi	A8L	VGA	26	3.0	6
		2016 Volkswage	Audi	A8L	VGA	25	3.0	6
		2016 Volkswage	Audi	A8L	VGA	9	4.0	8
		2016 Volkswage	Audi	A8L	VGA	66	6.3	12
		2016 Volkswage	Audi	allroad qua	VGA	32	2.0	4
		2016 Volkswage	Audi	Q3	VGA	53	2.0	4
		2016 Volkswage	Audi	Q3 quattro	VGA	54	2.0	4
		2016 Volkswage	Audi	Q5	VGA	31	2.0	4
Diesel;		2016 Volkswage	Audi	Q5	VGA	27	3.0	6
		2016 Volkswage	Audi	Q5	VGA	47	3.0	6
Hybrid;		2016 Volkswage	Audi	Q5 Hybrid	VGA	62	2.0	4
		2016 Volkswage	Audi	RS7	VGA	12	4.0	8
		2016 Volkswage	Audi	S3	VGA	55	2.0	4
		2016 Volkswage	Audi	S4	VGA	42	3.0	6
		2016 Volkswage	Audi	S4	VGA	45	3.0	6
		2016 Volkswage	Audi	S5	VGA	43	3.0	6
		2016 Volkswage	Audi	S5	VGA	46	3.0	6
		2016 Volkswage	Audi	S5 Cabriole	VGA	44	3.0	6
		2016 Volkswage	Audi	S6	VGA	14	4.0	8
		2016 Volkswage	Audi	S7	VGA	13	4.0	8
		2016 Volkswage	Audi	S8	VGA	11	4.0	8
		2016 Volkswage	Audi	SQ5	VGA	48	3.0	6
		2016 Volkswage	Audi	TT Coupe c	VGA	60	2.0	4
		2016 Volkswage	Audi	TT Roadste	VGA	61	2.0	4
		2016 Volkswage	Audi	TTS Coupe	VGA	52	2.0	4
		2016 Volkswage	Bentley	Continenta	VGA	6	4.0	8
		2016 Volkswage	Bentley	Continenta	VGA	28	6.0	12
		2016 Volkswage	Bentley	Continenta	VGA	7	4.0	8

	2016	Volkswage	Bentley	Continenta	VGA	30	6.0	12
	2016	Volkswage	Bentley	Flying Spur	VGA	8	4.0	8
	2016	Volkswage	Bentley	Flying Spur	VGA	29	6.0	12
	2016	Volkswage	Bentley	Mulsanne	VGA	5	6.8	8
	2016	Volkswage	Lamborghi	Aventador	VGA	17	6.5	12
	2016	Volkswage	Lamborghi	Aventador	VGA	18	6.5	12
	2016	Volkswage	Lamborghi	Huracan	VGA	87	5.2	10
	2016	Volkswage	Lamborghi	Huracan Sp	VGA	88	5.2	10
	2016	Volkswage	Volkswage	Beetle	VGA	71	1.8	4
	2016	Volkswage	Volkswage	Beetle	VGA	74	1.8	4
	2016	Volkswage	Volkswage	Beetle	VGA	82	2.0	4
	2016	Volkswage	Volkswage	Beetle	VGA	79	2.0	4
	2016	Volkswage	Volkswage	Beetle Con	VGA	72	1.8	4
	2016	Volkswage	Volkswage	Beetle Con	VGA	77	2.0	4
	2016	Volkswage	Volkswage	Beetle Con	VGA	80	2.0	4
	2016	Volkswage	Volkswage	CC	VGA	63	2.0	4
	2016	Volkswage	Volkswage	CC	VGA	64	2.0	4
	2016	Volkswage	Volkswage	CC 4Motio	VGA	68	3.6	6
	2016	Volkswage	Volkswage	Eos	VGA	65	2.0	4
	2016	Volkswage	Volkswage	Golf	VGA	58	1.8	4
	2016	Volkswage	Volkswage	Golf	VGA	59	1.8	4
	2016	Volkswage	Volkswage	Golf R	VGA	22	2.0	4
	2016	Volkswage	Volkswage	Golf R	VGA	23	2.0	4
	2016	Volkswage	Volkswage	Golf Sport\	VGA	56	1.8	4
	2016	Volkswage	Volkswage	Golf Sport\	VGA	57	1.8	4
	2016	Volkswage	Volkswage	GTI	VGA	40	2.0	4
	2016	Volkswage	Volkswage	GTI	VGA	41	2.0	4
	2016	Volkswage	Volkswage	Jetta	VGA	85	1.4	4
	2016	Volkswage	Volkswage	Jetta	VGA	70	1.8	4
	2016	Volkswage	Volkswage	Jetta	VGA	73	1.8	4
	2016	Volkswage	Volkswage	Jetta	VGA	76	2.0	4
	2016	Volkswage	Volkswage	Jetta	VGA	78	2.0	4
Hybrid;	2016	Volkswage	Volkswage	Jetta Hybri	VGA	83	1.4	4
	2016	Volkswage	Volkswage	Passat	VGA	81	1.8	4
	2016	Volkswage	Volkswage	Passat	VGA	67	3.6	6
	2016	Volkswage	Volkswage	Tiguan	VGA	21	2.0	4
	2016	Volkswage	Volkswage	Tiguan 4M	VGA	20	2.0	4
Diesel;	2016	Volkswage	Volkswage	Touareg	VGA	19	3.0	6
	2016	Volkswage	Volkswage	Touareg	VGA	69	3.6	6

Transmiss	City FE (G	Hwy FE (C	Comb FE	Low'd City	Low'd HW	Low'd Cor	City Unad	Hwy Unad	Comb Una
Auto(AM-S	23	33	27				28.9	46.6	34.858
Auto(AM-S	24	35	28				30.5	47	36.2224
Auto(AM-S	23	32	26				29	44.2	34.3094
Auto(AM-S	24	33	27				30	44.6	35.1828
Auto(AV-S	24	31	27				30.3	44.6	35.4089
Auto(S8)	21	30	25				27.1	42.2	32.3011
Manual(M	22	32	26				27.6526	43.9914	33.2017
Auto(S8)	21	29	24				26.4	41	31.4377
Auto(S8)	21	30	25				27.1	42.2	32.3011
Manual(M	22	32	26				27.6526	43.9914	33.2017
Auto(AM-S	24	35	28				31.2269	48.8	37.2657
Auto(S8)	22	32	26				27.8348	45.5	33.7274
Auto(S8)	20	30	24				25.6	41.9	31.0325
Auto(S8)	25	38	30				31.1687	52.7	38.1901
Auto(S8)	20	30	24				25.6	41.9	31.0325
Auto(S8)	25	38	30				31.1687	52.7	38.1901
Auto(S8)	24	36	28				29.9399	51.4	36.8664
Auto(S8)	19	29	22				23.5657	39.6	28.8162
Auto(S8)	18	29	22				22.278	39.1	27.6266
Auto(S8)	14	22	17				17.2	28.6	20.9595
Auto(S8)	21	28	24				26.7	39.2	31.1732
Auto(S6)	20	29	23				24.8499	40	29.9555
Auto(S6)	20	28	23				24.8	38.5	29.5284
Auto(S8)	20	28	23				24.8	38.6	29.5548
Auto(S8)	24	31	27				29.1832	44.1	34.4228
Auto(S8)	18	26	21				22.8446	35.5	27.2096
Auto(S8)	24	30	26				30.4	39.9	34.048
Auto(S8)	15	25	18				17.8763	33.1799	22.5584
Auto(AM-S	23	31	26				28.5	41.5	33.1767
Auto(AM-S	18	28	21				22.4	35.8	26.9372
Manual(M	17	26	20				20	33.4	24.4063
Auto(AM-S	18	28	21				22.4	35.8	26.9372
Manual(M	17	26	20				20	33.4	24.4063
Auto(AM-S	18	26	21				22.1	34.7	26.4165
Auto(AM-S	18	27	21				21.9777	36.8	26.843
Auto(AM-S	17	27	21				21.7499	37.3	26.7724
Auto(S8)	17	27	20				19.9	36.4	24.9995
Auto(S8)	17	24	19				20.8	32.9	24.9252
Auto(AM-S	23	30	26				28.8051	41.9128	33.5228
Auto(AM-S	23	30	26				28.8051	41.9128	33.5228
Auto(AM-S	23	27	25				28.2	38	31.9024
Auto(S8)	15	25	19				19.1	33.5	23.6806
Auto(S8)	12	21	15				15.4	28.3	19.3741
Auto(S8)	14	24	17				17.3	31.8	21.7662

Auto(S8)	12	20	15	14.4	26.7	18.1658
Auto(S8)	14	24	17	17.3	31.8	21.7662
Auto(S8)	12	20	15	14.4	26.7	18.1658
Auto(S8)	11	18	13	13.6993	24.8	17.1546
Auto(AM-S	11	18	13	12.6	25.2	16.2581
Auto(AM-S	10	17	12	11.7313	21.9881	14.8481
Auto(AM-S	14	21	17	17.3	27	20.6362
Auto(AM-S	14	20	16	17	26.4	20.2436
Auto(S6)	25	34	28	31.4714	47.6267	37.1407
Manual(M	25	34	28	31.76	47.8	37.4089
Auto(AM-S	24	31	27	30.3901	44.2	35.362
Manual(M	23	31	26	28.5453	43.3257	33.7222
Auto(S6)	25	34	28	31.4714	47.6267	37.1407
Auto(AM-S	23	31	26	29.1428	43.2697	34.1618
Manual(M	23	31	26	28.5453	43.3257	33.7222
Auto(AM-S	22	31	25	26.9721	42.4615	32.2692
Manual(M	21	32	25	25.7082	43.8369	31.5863
Auto(S6)	17	25	20	20.5	33.5	24.8373
Auto(AM-S	22	30	25	27.5	41.5	32.4219
Auto(S6)	25	36	29	32.5	51.1	38.8661
Manual(M	25	37	30	32.6	52.5	39.3042
Auto(AM-S	23	30	26	28.3	40.9	32.8547
Manual(M	22	31	25	26.5	39.7	31.1626
Auto(S6)	25	35	29	32.7	49.4	38.567
Manual(M	25	36	29	31.7	50.5	38.0792
Auto(AM-S	25	33	28	30.7	45.3	35.9078
Manual(M	25	34	28	30	46.4	35.674
Auto(S6)	28	39	32	36.4	58.1	43.7538
Auto(S6)	25	36	29	32.6424	51.503	39.083
Manual(M	25	37	29	32.2552	52.1	38.9275
Auto(AM-S	24	33	27	30.639	47.1	36.3569
Manual(M	23	33	27	28.8819	46.678	34.8632
Auto(AM-S	42	48	44	57.5	65.3	60.7663
Auto(S6)	25	38	29	32.1277	53.336	39.1294
Auto(AM-S	20	28	23	23.9	37.3	28.5088
Auto(S6)	21	26	23	25.9873	36.0386	29.7169
Auto(S6)	20	26	23	25.7782	36.0407	29.5668
Auto(S8)	21	29	24	25.3	41	30.5673
Auto(S8)	17	23	19	21.3	31.6	24.9612

City Unrd	Hwy Unrd	Comb Unr	Guzzler?	Air Aspir I	Air Aspira	Trans	Trans Des	Trans, Otl	# Gears
23.4556	33.3421	27.0673		TC	Turbochar	AMS	Automated Manual-	Selectable	6
24.3444	34.5845	28.0867		TC	Turbochar	AMS	Automated Manual-	Selectable	6
23.312	31.5429	26.4136		TC	Turbochar	AMS	Automated Manual-	Selectable	6
24.0818	32.6198	27.297		TC	Turbochar	AMS	Automated Manual-	Selectable	6
23.7847	30.8933	26.532		TC	Turbochar	SCV	Selectable Continuously Variable		8
21.3584	30.0427	24.5522		TC	Turbochar	SA	Semi-Automatic		8
22.2613	32.093	25.8209		TC	Turbochar	M	Manual		6
20.8442	29.2228	23.9319		TC	Turbochar	SA	Semi-Automatic		8
21.3584	30.0427	24.5522		TC	Turbochar	SA	Semi-Automatic		8
22.2613	32.093	25.8209		TC	Turbochar	M	Manual		6
24.3335	34.5182	28.059		TC	Turbochar	AMS	Automated Manual-	Selectable	7
21.8708	32.2876	25.5853		TC	Turbochar	SA	Semi-Automatic		8
20.2543	29.8379	23.6763		SC	Supercha	SA	Semi-Automatic		8
25.2158	37.5811	29.5982		TC	Turbochar	SA	Semi-Automatic		8
20.2543	29.8379	23.6763		SC	Supercha	SA	Semi-Automatic		8
25.2158	37.5811	29.5982		TC	Turbochar	SA	Semi-Automatic		8
23.8727	36.3252	28.2271		TC	Turbochar	SA	Semi-Automatic		8
18.6853	29.3211	22.3303		SC	Supercha	SA	Semi-Automatic		8
17.9485	28.5015	21.5369		TC	Turbochar	SA	Semi-Automatic		8
13.8358	21.9706	16.602	G	NA	Naturally A	SA	Semi-Automatic		8
21.0646	27.9892	23.7037		TC	Turbochar	SA	Semi-Automatic		8
19.6619	28.538	22.8617		TC	Turbochar	SA	Semi-Automatic		6
19.7028	28.0105	22.7375		TC	Turbochar	SA	Semi-Automatic		6
19.6619	27.5771	22.5781		TC	Turbochar	SA	Semi-Automatic		8
23.6286	31.3636	26.5783		TC	Turbochar	SA	Semi-Automatic		8
17.8443	25.5746	20.6536		SC	Supercha	SA	Semi-Automatic		8
24.0075	29.7936	26.3065		TC	Turbochar	SA	Semi-Automatic		8
14.521	25.1577	17.9329		TC	Turbochar	SA	Semi-Automatic		8
23.1833	30.7065	26.056		TC	Turbochar	AMS	Automated Manual-	Selectable	6
18.117	27.558	21.419		SC	Supercha	AMS	Automated Manual-	Selectable	7
17.0438	26.023	20.1767		SC	Supercha	M	Manual		6
18.117	27.558	21.419		SC	Supercha	AMS	Automated Manual-	Selectable	7
17.0438	26.023	20.1767		SC	Supercha	M	Manual		6
17.6699	25.953	20.6333		SC	Supercha	AMS	Automated Manual-	Selectable	7
17.7328	26.6352	20.8721		TC	Turbochar	AMS	Automated Manual-	Selectable	7
17.4937	26.7312	20.715		TC	Turbochar	AMS	Automated Manual-	Selectable	7
16.5369	26.7008	19.9551		TC	Turbochar	SA	Semi-Automatic		8
16.7285	23.6581	19.2682		SC	Supercha	SA	Semi-Automatic		8
23.3039	30.3915	26.0363		TC	Turbochar	AMS	Automated Manual-	Selectable	6
23.3039	30.3915	26.0363		TC	Turbochar	AMS	Automated Manual-	Selectable	6
22.8034	27.3644	24.6524		TC	Turbochar	AMS	Automated Manual-	Selectable	6
15.2087	25.3816	18.5553		TC	Turbochar	SA	Semi-Automatic		8
12.4737	21.0866	15.2827	G	TC	Turbochar	SA	Semi-Automatic		8
13.819	23.8488	17.0447	G	TC	Turbochar	SA	Semi-Automatic		8

12.0228	20.0478	14.6643	G	TC	Turbocharged	Semi-Automatic 8
13.819	23.8488	17.0447	G	TC	Turbocharged	Semi-Automatic 8
12.0228	20.0478	14.6643	G	TC	Turbocharged	Semi-Automatic 8
11.1823	17.9616	13.4701	G	TC	Turbocharged	Semi-Automatic 8
10.6055	18.4729	13.1199	G	NA	Naturally Aspirated	Automated Manual- Selectable 7
9.9676	16.7	12.1766	G	NA	Naturally Aspirated	Automated Manual- Selectable 7
14.318	20.6311	16.6044	G	NA	Naturally Aspirated	Automated Manual- Selectable 7
13.9274	19.9987	16.1311	G	NA	Naturally Aspirated	Automated Manual- Selectable 7
24.5488	33.7087	27.9689		TC	Turbocharged	Semi-Automatic 6
24.7637	33.8438	28.164		TC	Turbocharged	Manual 5
23.7579	31.405	26.6815		TC	Turbocharged	Automated Manual- Selectable 6
23.0368	30.5347	25.8985		TC	Turbocharged	Manual 6
24.5488	33.7087	27.9689		TC	Turbocharged	Semi-Automatic 6
22.8175	30.7926	25.8277		TC	Turbocharged	Automated Manual- Selectable 6
23.0368	30.5347	25.8985		TC	Turbocharged	Manual 6
21.8736	31.0153	25.2185		TC	Turbocharged	Automated Manual- Selectable 6
20.7831	31.7504	24.6082		TC	Turbocharged	Manual 6
16.9415	25.219	19.8774		NA	Naturally Aspirated	Semi-Automatic 6
21.7634	30.1121	24.8658		TC	Turbocharged	Automated Manual- Selectable 6
25.264	36.0643	29.1989		TC	Turbocharged	Semi-Automatic 6
25.3353	37.0021	29.5244		TC	Turbocharged	Manual 5
23.0603	30.0715	25.7633		TC	Turbocharged	Automated Manual- Selectable 6
21.6528	30.5249	24.911		TC	Turbocharged	Manual 6
25.4066	34.9222	28.9572		TC	Turbocharged	Semi-Automatic 6
24.6921	35.6616	28.6591		TC	Turbocharged	Manual 5
24.6434	32.6158	27.6891		TC	Turbocharged	Automated Manual- Selectable 6
24.9095	34.2917	28.407		TC	Turbocharged	Manual 6
27.8072	39.2595	32.009		TC	Turbocharged	Semi-Automatic 6
25.3353	36.3325	29.3303		TC	Turbocharged	Semi-Automatic 6
25.1212	36.7344	29.2878		TC	Turbocharged	Manual 5
23.902	33.3709	27.4007		TC	Turbocharged	Automated Manual- Selectable 6
23.1336	32.7327	26.6506		TC	Turbocharged	Manual 6
41.5773	48.2766	44.3466		TC	Turbocharged	Automated Manual- Selectable 7
24.9783	37.5368	29.4054		TC	Turbocharged	Semi-Automatic 6
19.7174	27.8048	22.6868		NA	Naturally Aspirated	Automated Manual- Selectable 6
20.5496	25.7855	22.6161		TC	Turbocharged	Semi-Automatic 6
20.3859	25.8136	22.5164		TC	Turbocharged	Semi-Automatic 6
20.799	28.6879	23.7363		TC	Turbocharged	Semi-Automatic 8
17.0411	22.7325	19.2048		NA	Naturally Aspirated	Semi-Automatic 8

Lockup Tc	Trans Cre	Drive Sys	Drive Des	Primary B	Max Ethar	Max Biodi	Range1 - I	Fuel Usag	Fuel Usag
tomated Ma	nual with	paddles)	2-Wheel D	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			G	Gasoline (F
MT with pad	dles)	F	2-Wheel D	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		422	GP	Gasoline (F
N	N	A	All Wheel	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		406	GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		422	GP	Gasoline (F
N	N	A	All Wheel	GVGAV02.	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel D	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV03.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ03.0	NU4	5		DU	Diesel, ultr
Y	N	A	All Wheel	GVGAV03.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ03.0	NU4	5		DU	Diesel, ultr
Y	N	A	All Wheel	GVGAJ03.0	NU4	5		DU	Diesel, ultr
Y	N	A	All Wheel	GVGAV03.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV06.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		406	GP	Gasoline (F
Y	N	F	2-Wheel D	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ02.(	85		455	GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ03.0	NU4	5		DU	Diesel, ultr
Y	N	A	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAT02.(	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
N	N	A	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
N	N	A	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV04.	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV04.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAJ03.(	15			GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel	GVGAV02.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV06.	15			GP	Gasoline (F
Y	N	A	All Wheel	GVGAV04.	15			GP	Gasoline (F

Y	N	A	All Wheel IGVGAV06.	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAV04.	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAV06.	15		GP	Gasoline (F
Y	N	R	2-Wheel DGVGAV06.	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IGVGAV06.	15		GPR	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IGVGAV06.	15		GPR	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IGVGAV05.	15		GP	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IGVGAV05.	15		GP	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DGVGAJ02.(	15		GP	Gasoline (F
N	N	F	2-Wheel DGVGAJ02.(	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAV03.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DGVGAV02.	15		GP	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	All Wheel IGVGAV02.	15		GP	Gasoline (F
N	N	A	All Wheel IGVGAV02.	15		GP	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
Y	N	F	2-Wheel DGVGAV01.	15		G	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DGVGAV02.	15		G	Gasoline (F
N	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DGVGAV01.	15		GP	Gasoline (F
Y	N	F	2-Wheel DGVGAV02.	15		G	Gasoline (F
tomated Ma	nual with	paddles)	2-Wheel DGVGAV03.	15		G	Gasoline (F
Y	N	F	2-Wheel DGVGAJ02.(	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAJ02.(	15		GP	Gasoline (F
Y	N	A	All Wheel IGVGAT03.0NU2		5	DU	Diesel, ultr
Y	N	A	All Wheel IGVGAT03.(	15		G	Gasoline (F

Fuel Unit	Fuel Unit	Gas Guzz	Gas Guzz	2Dr Pass	2Dr Lugg	4Dr Pass	4Dr Lugg	Htchbk Pa	Htchbk Lu
MPG	miles per gal	Unleaded Recommended)	Not exempt			86	12		
MPG	miles per gal	Unleaded Recommended)	Not exempt	79	10				
MPG	miles per gal	Unleaded Recommended)	Not exempt	79	10				
MPG	miles per gal	Unleaded Recommended)	Not exempt			86	10		
MPG	miles per gal	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per gal	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per gal	Unleaded Recommended)	Not exempt			91	12		
MPG	miles per gal	Unleaded Recommended)	Not exempt	81	10				
MPG	miles per gal	Unleaded Recommended)	Not exempt	84	12				
MPG	miles per gal	Unleaded Recommended)	Not exempt	84	12				
MPG	miles per gal	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per gal	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per gal	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per gal	ulfur (15 ppm maximum)	Not exempt			98	16		
MPG	miles per gal	Unleaded Recommended)	Not exempt					94	25
MPG	miles per gal	ulfur (15 ppm maximum)	Not exempt					94	25
MPG	miles per gal	ulfur (15 ppm maximum)	Not exempt			107	15		
MPG	miles per gal	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per gal	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per gal	Unleaded Recommended)	Not exempt			107	15		
MPG	miles per gal	Unleaded Recommended)	Not exempt			90	28		
MPG	miles per gal	Unleaded Recommended)	Not exempt					84	17
MPG	miles per gal	Unleaded Recommended)	Not exempt					84	17
MPG	miles per gal	Unleaded Recommended)	Truck						
MPG	miles per gal	ulfur (15 ppm maximum)	Truck						
MPG	miles per gal	Unleaded Recommended)	Truck						
MPG	miles per gal	Unleaded Recommended)	Truck						
MPG	miles per gal	Unleaded Recommended)	Not exempt					94	25
MPG	miles per gal	Unleaded Recommended)	Not exempt			86	10		
MPG	miles per gal	Unleaded Recommended)	Not exempt			90	13		
MPG	miles per gal	Unleaded Recommended)	Not exempt			90	13		
MPG	miles per gal	Unleaded Recommended)	Not exempt	84	13				
MPG	miles per gal	Unleaded Recommended)	Not exempt	84	13				
MPG	miles per gal	Unleaded Recommended)	Not exempt	81	10				
MPG	miles per gal	Unleaded Recommended)	Not exempt			98	16		
MPG	miles per gal	Unleaded Recommended)	Not exempt					94	25
MPG	miles per gal	Unleaded Recommended)	Not exempt			100	15		
MPG	miles per gal	Unleaded Recommended)	Truck						
MPG	miles per gal	Unleaded Recommended)	Not exempt	74	13				
MPG	miles per gal	Unleaded Recommended)	Not exempt						
MPG	miles per gal	Unleaded Recommended)	Not exempt	74	13				
MPG	miles per gal	Unleaded Recommended)	Not exempt	89	11				
MPG	miles per gal	Unleaded Recommended)	Not exempt	89	11				
MPG	miles per gal	Unleaded Recommended)	Not exempt	86	7				

Unleaded Recommended)	MPG	miles per gal	Not exempt	86	7		
Unleaded Recommended)	MPG	miles per gal	Not exempt	102	13		
Unleaded Recommended)	MPG	miles per gal	Not exempt	102	13		
Unleaded Recommended)	MPG	miles per gal	Not exempt			101	11
Unleaded Required)	MPG	miles per gal	Not exempt				
Unleaded Required)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt	81	7		
Unleaded Recommended)	MPG	miles per gal	Not exempt	81	7		
Unleaded Recommended)	MPG	miles per gal	Not exempt	81	7		
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	13		
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	13		
Unleaded Recommended)	MPG	miles per gal	Not exempt	94	13		
Unleaded Recommended)	MPG	miles per gal	Not exempt	77	11		
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	30
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	30
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt				
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt			94	16
Unleaded Recommended)	MPG	miles per gal	Not exempt			102	16
Unleaded Recommended)	MPG	miles per gal	Not exempt			102	16
Unleaded Recommended)	MPG	miles per gal	Truck				
Unleaded Recommended)	MPG	miles per gal	Truck				
ulfur (15 ppm maximum)	MPG	miles per gal	Truck				
Unleaded Recommended)	MPG	miles per gal	Truck				

Annual Fu	EPA Calcu	Comment	City2 FE (H	Hwy2 Fue	Comb2 Fu	Low'd City	Low'd Hw	Low'd Cor	City2 Una
1650	1650	fuel costs corrected							
1600	1600	fuel costs corrected							
1750	1750	fuel cost corrections							
1650	1650	fuel cost corrections							
1850	1850								
2000	2000		15	22	18				19.5
1900	1900								
2050	2050		15	21	17				19
2000	2000		15	22	18				19.5
1900	1900								
1750	1750								
1900	1900	CO2 unrounded and rounded values corrected, typo. further CO2 corrections							
2050	2050								
1700	1700	release date change,added configuration after EPA confirmatory testing, corrected unadj unr							
2050	2050								
1700	1700	added configuration after EPA confirmatory testing to base level, corrected unadj unrnd com							
1800	1800								
2250	2250								
2250	2250	engine code correction, data sub used							
2900	2900								
2050	2050		15	21	17				19.2
2150	2150								
2150	2150								
2150	2150		14	19	16				17.4
1850	1850	corrected fuel economy rating							
2350	2350								
1900	1900								
2750	2750	50/50 weighting of best and worse (D&S) testing							
1900	1900								
2350	2350								
2500	2500								
2350	2350								
2500	2500								
2350	2350								
2350	2350	corrected typo adj unrounded city CO2 value.							
2350	2350								
2500	2500	correct annual and five year fuel additional cost values							
2600	2600								
1750	1750	fuel costs correction							
1750	1750	fuel cost correction							
2000	2000								
2600	2600	engine configuration changed to 520 HP = #6, release date changed							
3300	3300	changed to a gasoline fueled label from flex fueled concept. 15% ethanol max							
2900	2900								

3300	3300	this is corrected to drop flex fueled concept for 2016; 15% ethanol max
2900	2900	
3300	3300	this is corrected to drop flex fueled concept for 2016, 15% ethanol max
3800	3800	Vehicle model equipped with cylinder deactivation with a switch. Active and inactive tests av
3800	3800	
4100	4100	corrected ETW with RLHP for SV
2900	2900	release date change
3100	3100	release date change
1600	1600	
1600	1600	5 YR FUEL SAVINGS CORRECTED
1650	1650	release date changed to 9/7
1750	1750	
1600	1600	
1750	1750	release date changed
1750	1750	
2000	2000	
2000	2000	
2250	2250	recommended fuel correction
2000	2000	
1550	1550	fuel costs corrected
1500	1500	
1900	1900	
2000	2000	
1550	1550	
1550	1550	
1600	1600	fuel cost correction, 5 year cost correction, add equivalent engine codes data substitution use
1600	1600	fuel cost correction, add equivalent engine codes, data substitution used
1400	1400	
1550	1550	gal/100 miles corrected
1550	1550	
1650	1650	combined typo unadjusted MPG value corrected, adjusted unrounded CO2 value corrected
1650	1650	adjusted unrounded CO2 values corrected
1100	1100	
1550	1550	release date change
1950	1950	recommended fuel change correction, release date now Sept 23rd
2150	2150	
2150	2150	
2100	2100	
2350	2350	

Hwy2 Unit	Comb2	CO2 Hwy2	CO2 Unit	Hwy2 Unit	Comb2 Unit	Range2 -	Fuel2 Usa	Fuel2 Usa	Fuel2 Unit	Fuel2 Unit
							Alternative Fuel			
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8	MPG	miles per g	
30	22.7545	15.0024	21.384	17.3296	287	E	Ethanol (E8	MPG	miles per g	
30.8	23.356	15.3563	21.9111	17.7451	304	E	Ethanol (E8	MPG	miles per g	

nd combined CO2 value

bined CO2

28.8	22.5882	15.1507	20.5603	17.1855	287	E	Ethanol (E8	MPG	miles per g	
27.1	20.7407	13.7947	19.3602	15.8444	317	E	Ethanol (E8	MPG	miles per g	

eraged together at 50/50. Data substitution for engine code with lesser HP.

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Alternative Fuel									
Fuel2 AltmCity	CO2 I	Hwy CO2	Comb CO	Fuel2 EPA	Descripto	Intake Val	Exhaust V	Carline Cl	Carline Cl
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	4	Compact C
2150	400	281	347	2150	SIDI; FFV;	2	2	4	Compact C
					SIDI;	2	2	4	Compact C
2300	410	288	355	2300	SIDI; FFV;	2	2	3	Subcompa
2150	400	281	347	2150	SIDI; FFV;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
						2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
						2	2	5	Midsize Ca
						2	2	6	Large Cars
					SIDI;	2	2	6	Large Cars
					SIDI;	2	2	6	Large Cars
					SIDI;	2	2	6	Large Cars
2300	406	300	358	2300	SIDI; FFV;	2	2	7	Small Stati
					SIDI;	2	2	4	Compact C
					SIDI;	2	2	4	Compact C
2450	450	320	392	2450	SIDI; FFV;	2	2	31	Small SUV 4WD
						2	2	31	Small SUV 4WD
					SIDI;	2	2	31	Small SUV 4WD
					SIDI;	2	2	31	Small SUV 4WD
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	4	Compact C
					SIDI;	2	2	4	Compact C
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	5	Midsize Ca
					SIDI;	2	2	31	Small SUV 4WD
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	1	Two Seate
					SIDI;	2	2	3	Subcompa
					SIDI;	2	2	4	Compact C
						2	2	4	Compact C
					SIDI;	2	2	3	Subcompa

	2	2	3 Subcompa
SIDI;	2	2	5 Midsize Ca
	2	2	5 Midsize Ca
	1	1	5 Midsize Ca
	2	2	1 Two Seate
	2	2	1 Two Seate
SIDI & PFI;	2	2	1 Two Seate
SIDI & PFI;	2	2	1 Two Seate
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	3 Subcompa
SIDI;	2	2	3 Subcompa
SIDI;	2	2	3 Subcompa
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	3 Subcompa
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	7 Small Stati
SIDI;	2	2	7 Small Stati
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	4 Compact C
SIDI;	2	2	5 Midsize Ca
SIDI;	2	2	5 Midsize Ca
SIDI;	2	2	30 Small SUV 2WD
SIDI;	2	2	31 Small SUV 4WD
	2	2	33 Standard SUV 4W
SIDI;	2	2	33 Standard SUV 4W

Car/Truck	Calc Appr	Sales	Release D	EPA FE Label	Dataset	Unique La	Label Rec	Relabel	Relabel D
car	Vehicle Specific 5-cycle	6/22/2015		18159	[redacted]	N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18160		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18162		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18161		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18128		N	N		
car	Derived 5-cycle label	6/22/2015		18103		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18121		N	N		
car	Derived 5-cycle label	6/22/2015		18105		N	N		
car	Derived 5-cycle label	6/22/2015		18104		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18122		N	N		
car	Vehicle Specific 5-cycle	3/23/2015		17682		N	N		
car	Derived 5-cycle label	3/23/2015		17714		N	N		
car	Derived 5-cycle label	1/8/2015		17475		N	N		
car	Vehicle Specific 5-cycle	3/30/2015		17658		N	N		
car	Derived 5-cycle label	1/8/2015		17474		N	N		
car	Vehicle Specific 5-cycle	3/30/2015		17659		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18062		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18055		N	N		
car	Vehicle Specific 5-cycle	6/8/2015		17744		N	N		
car	Vehicle Specific 5-cycle	7/13/2015		18361		N	N		
cars	Derived 5-cycle label	6/22/2015		18102		N	N		
car	Derived 5-cycle label	6/22/2015		18130		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18131		N	N		
	Derived 5-cycle label	6/22/2015		18101		N	N		
	Vehicle Specific 5-cycle	6/22/2015		18088		N	N		
	Vehicle Specific 5-cycle	6/22/2015		18118		N	N		
	Vehicle Specific 5-cycle	6/22/2015		18216		N	N		
car	Vehicle Specific 5-cycle	6/8/2015		17565		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18132		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18113		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18116		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18114		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18117		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18115		N	N		
car	Vehicle Specific 5-cycle	3/23/2015		17715		N	N		
car	Vehicle Specific 5-cycle	3/23/2015		17657		N	N		
car	Vehicle Specific 5-cycle	6/8/2015		17589		N	N		
	Vehicle Specific 5-cycle	6/22/2015		18120		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18213		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18212		N	N		
car	Vehicle Specific 5-cycle	6/22/2015		18129		N	N		
car	Vehicle Specific 5-cycle	5/26/2015		17559		N	N		
car	Vehicle Specific 5-cycle	7/20/2015		18239		N	N		
car	Vehicle Specific 5-cycle	5/26/2015		17560		N	N		

car	Vehicle Specific 5-cycle label	7/20/2015	18241	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/25/2015	17561	[redacted]	N	N
car	Vehicle Specific 5-cycle label	6/15/2015	18240	[redacted]	N	N
car	Derived 5-cycle label	1/14/2015	17486	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/1/2015	17766	[redacted]	N	N
car	Vehicle Specific 5-cycle label	5/1/2015	17787	[redacted]	N	N
car	Vehicle Specific 5-cycle label	9/14/2015	18710	[redacted]	N	N
car	Vehicle Specific 5-cycle label	3/14/2016	18711	[redacted]	N	N
car	Derived 5-cycle label	7/20/2015	18391	[redacted]	N	N
car	Derived 5-cycle label	7/20/2015	18461	[redacted]	N	N
car	Derived 5-cycle label	9/7/2015	18828	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/20/2015	18398	[redacted]	N	N
car	Derived 5-cycle label	7/20/2015	18392	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/27/2015	18576	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/20/2015	18399	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18217	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18218	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18370	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18307	[redacted]	N	N
car	Derived 5-cycle label	7/13/2015	18183	[redacted]	N	N
car	Derived 5-cycle label	7/13/2015	18185	[redacted]	N	N
car	Vehicle Specific 5-cycle label	6/22/2015	18133	[redacted]	N	N
car	Vehicle Specific 5-cycle label	6/22/2015	18134	[redacted]	N	N
car	Derived 5-cycle label	7/13/2015	18176	[redacted]	N	N
car	Derived 5-cycle label	7/13/2015	18179	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18365	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/13/2015	18366	[redacted]	N	N
car	Derived 5-cycle label	8/17/2015	18665	[redacted]	N	N
car	Derived 5-cycle label	7/20/2015	18462	[redacted]	N	N
car	Derived 5-cycle label	7/30/2015	18714	[redacted]	N	N
car	Derived 5-cycle label	7/20/2015	18570	[redacted]	N	N
car	Vehicle Specific 5-cycle label	7/20/2015	18464	[redacted]	N	N
car	Vehicle Specific 5-cycle label	8/17/2015	18676	[redacted]	N	N
car	Derived 5-cycle label	9/23/2015	18620	[redacted]	N	N
car	Vehicle Specific 5-cycle label	9/23/2015	18621	[redacted]	N	N
	Derived 5-cycle label	7/13/2015	18215	[redacted]	N	N
	Derived 5-cycle label	7/13/2015	18214	[redacted]	N	N
D	Vehicle Specific 5-cycle label	7/13/2015	17922	[redacted]	N	N
D	Derived 5-cycle label	7/27/2015	18591	[redacted]	N	N

Suppress	Police/Em	Comment	Cyl Deact	Cyl Deact	Var Valve	Var Valve	Var Valve	Var Valve	Energy St
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	1.8L Engin	N		Y	CONTINUC	N		
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve System	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve System	
N	N	N			Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	N			Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	N			Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	Electro/Hy	Y	Audi Valve System	
N	N	Engine Coc	N		Y	Electro/Hy	Y	Audi Valve System	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	N			N		N		
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	Y	12 to 6 cyli	Y	Intake and	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM FO	
N	N	N			N		N		
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVBattery(s)	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	N		Y	CONTINUC	Y	Audi Valve System - Exhaust	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	N		Y	CONTINUC	Y	AUDI VALVE LIFT SYSTEM	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve System	
N	N	2.0L Engin	N		Y	CONTINUC	Y	Audi Valve System	
N	N	Engine Coc	N		Y	CONTINUC	N		
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	
N	N	Engine Coc	N		Y	INLET AND	N		
N	N	Engine Coc	Y	Deactivatic	Y	Continuou	Y	Multi-lobe Int/Exh cam desig	

N	N	Engine Coc	N	Y	INLET AND	N
N	N	Engine Coc	Y	Deactivatic	Y	Continuou Y Multi-lobe Int/Exh cam desig
N	N	Engine Coc	N	Y	INLET AND	N
N	N	Engine cod	Y	Cylinder d	Y	Variation c N
N	N	Engine Coc	Y	ELECTRON	Y	HYDRAULI(N
N	N	Engine Coc	Y	ELECTRON	Y	HYDRAULI(N
N	N	ENGINE CC	Y	Soft COD. !	Y	INLET AND Y Fixed 1: One Setting of Valve
N	N	ENGINE CC	Y	Soft COD. !	Y	INLET AND Y Fixed 1: One Setting of Valve
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	N		Y	position of	N
N	N	N		Y	position of	N
N	N	N		Y	position of	N
N	N	N		Y	CONTINUC	N
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	Engine Coc	N	Y	CONTINUC	Y Audi Valve System - Exhaust
N	N	Engine Coc	N	Y	CONTINUC	Y Audi Valve System - Exhaust
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	1.8L Engin	N	Y	CONTINUC	N
N	N	2.0L Engin	N	Y	CONTINUC	Y Audi Valve System
N	N	2.0L Engin	N	Y	CONTINUC	Y Audi Valve System
N	N	Engine Coc	N	Y	MECHANIC	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine Coc	N	Y	MECANICA	N
N	N	N		Y	MECANICA	N Battery(s)
N	N	Engine Coc	N	Y	MECANICA	N
N	N	Engine cod	N	Y	Electronic	N
N	N	N		Y	position of	N
N	N	N		Y	position of	N
N	N	Engine Coc	N	N		N
N	N	N		Y	INTAKE / E	N

evice Desc	# Batteries	Battery Ty	Battery Ty	Total Volt	Batt Ener	Batt Spec	Batt Char	Comment	# Capacit
Energy St									
R / EXHAUST									
R / EXHAUST									
R / EXHAUST									
R / EXHAUST									
alves to a valve lift of zero (all valves are closed), the fuel injection and ignition for each cylinder is deactivated and the valves remain closed until the engine has run down.									
R / EXHAUST									
R / EXHAUST									
	1	Lithium Ion		266	5	37	On-Board		
alves to a valve lift of zero (all valves are closed), the fuel injection and ignition for each cylinder is deactivated and the valves remain closed until the engine has run down.						

ECHANICAL-HYDRAULIC
alves on a single camshaft. The first valve lift profile (all valves designed) is for injection and ignition of reactive reactions as described
ECHANICAL-HYDRAULIC
aust valves on a single camshaft. No change in valve overlaps.
ONTINUOUSLY VVT
ONTINUOUSLY VVT
ECHANICAL-HYDRAULIC
ECHANICAL-HYDRAULIC
AMS
AMS
AMS
AMS
AMS
AMS
AMS
controlled and hydraulically adjusted
controlled and hydraulically adjusted
controlled and hydraulically adjusted

valves only
valves only

AND OUTLET CAMS
AMS
AMS
AMS
AMS
ND OUTLET CAMS 1 Lithium Ion 220 1100 27 On-Board
AMS

controlled and hydraulically adjusted
controlled and hydraulically adjusted

LICALLY AND CONTROLLED ELECTRONICALLY

Regen Bra	Regen Bra	Regen Bra	Driver Cnt	Fuel Cell I	Usable H2	Fuel Cell (	HEV-EV C	# Drive M	Motor Ger

est driving 3rd gear or higher, ECT greater than 40C, engine speed 930 to 3500 RPM, vehicle speed greater than 25 km
s down.

Electrical RBRAKE PECFront WheY 1Other

Motor Ger	Rated Mot	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Mete	Fuel Cell V	Off Board	Camless V	Oil Viscosi
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				CRDI	Common Rail Direct Diesel Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
		40		GDI	Spark Ignit	N	N	N	5W40 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
				GDI	Spark Ignit	N		N	5W40
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignition Direct Injection			N	5W40 VW
				GDI	Spark Ignit	N		N	5W40
h				GDI	Spark Ignition Direct Injection			N	5W30 VW
				MFI	Multipoint	N		N	5W30 VW
h				GDI	Spark Ignition Direct Injection			N	5W30 VW

		MFI	Multipoint	N	N	5W30 VW
h		GDI	Spark Ignition Direct Injection		N	5W30 VW
		MFI	Multipoint	N	N	5W30 VW
		MFI	Multipoint/sequential fuel injection		N	0W40 / VW
		MFI	Multipoint/sequential fuel injection		N	5W30 VW
		MFI	Multipoint/sequential fuel injection		N	5W30 VW
		GDPI	Spark Ignition direct & ported injection		N	5W30 VW
		GDPI	Spark Ignition direct & ported injection		N	5W30 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W-40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 / VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignit	N	N	5W40
		GDI	Spark Ignit	N	N	5W40
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
3 PHASE PI	15	GDI	Spark Ignit	N	N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW
		CRDI	Common Rail Direct Diesel Injection		N	5W30 VW
		GDI	Spark Ignition Direct Injection		N	5W40 VW

Stop/Start	Stop/Start	Trans in FE	Trans as I	Model Typ	Charge De	Charge De	Charge Su	Charge Su	EPA Calcul
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AV-S	Auto(AV-S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M6)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Manual(M	Manual(M6)						
Y	Yes	Auto(AM-S	Auto(AM-S7)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
Y50700	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S6)	Auto(S6)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
Y	Yes	Auto(S8)	Auto(S8)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S	Auto(AM-S6)						
N	No	Auto(AM-S	Auto(AM-S7)						
N	No	Manual(M	Manual(M6)						
N	No	Auto(AM-S	Auto(AM-S7)						
N	No	Manual(M	Manual(M6)						
N	No	Auto(AM-S	Auto(AM-S7)						
N50700	No	Auto(AM-S	Auto(AM-S7)						
N50700	No	Auto(AM-S	Auto(AM-S7)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N	No	Auto(AM-S	Auto(AM-S	TT Coupe quattro					
N	No	Auto(AM-S	Auto(AM-S	TT Coupe quattro					
N	No	Auto(AM-S	Auto(AM-S6)						
N50700	No	Auto(S8)	Auto(S8)						
N	No	Auto(S8)	Auto(S8)						
N50700	No	Auto(S8)	Auto(S8)						

N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	
Y	Yes	Auto(AM-S	Auto(AM-S7)	
Y	Yes	Auto(AM-S	Auto(AM-S7)	
N	No	Auto(AM-S	Auto(AM-S7)	
N	No	Auto(AM-S	Auto(AM-S7)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M5)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M5)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M5)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S6)	Auto(S6)	
N	No	Manual(M	Manual(M5)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Manual(M	Manual(M6)	
Y	Yes	Auto(AM-S	Auto(AM-S7)	
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(AM-S	Auto(AM-S6)	
N	No	Auto(S6)	Auto(S6)	Tiguan front
N	No	Auto(S6)	Auto(S6)	
N	No	Auto(S8)	Auto(S8)	
N	No	Auto(S8)	Auto(S8)	

[redacted]	EPA Calculated Gas G	[redacted]	[redacted]	#1 Smog R	#1 Mfr Sm	#1 EPA Sm	SmartWay
34.9	[redacted]	6	6	GVGAV02.	9		
36.2	[redacted]	7	7	GVGAV02.	9		
34.3	[redacted]	6	6	GVGAV02.	9		
35.2	[redacted]	6	6	GVGAV02.	9		
35.4	[redacted]	6	6	GVGAV02.	5		
32.3	[redacted]	6	6	GVGAJ02.(	5		
33.1	[redacted]	6	6	GVGAV02.	5		
31.4	[redacted]	5	5	GVGAJ02.(	5		
32.3	[redacted]	6	6	GVGAJ02.(	5		
33.1	[redacted]	6	6	GVGAV02.	5		
37.3	[redacted]	7	7	GVGAV02.	6		
33.7	[redacted]	6	6	GVGAV02.	6		
31	[redacted]	5	5	GVGAV03.	5		
38.2	[redacted]	7	6	GVGAJ03.(	5		
31	[redacted]	5	5	GVGAV03.	5		
38.2	[redacted]	7	6	GVGAJ03.(	5		
36.9	[redacted]	7	6	GVGAJ03.(	5		
28.8	[redacted]	5	5	GVGAV03.	5		
27.6	[redacted]	5	5	GVGAV04.	5		
21.1	[redacted]	3	3	GVGAV06.	5		
31.2	[redacted]	5	5	GVGAJ02.(	5		
30	[redacted]	5	5	GVGAV02.	5		
29.5	[redacted]	5	5	GVGAV02.	5		
29.6	[redacted]	5	5	GVGAJ02.(	5		
34.3	[redacted]	6	5	GVGAJ03.(	5		
27.2	[redacted]	5	5	GVGAJ03.(	5		
34	[redacted]	6	6	GVGAT02.(	5		
22.6	[redacted]	4	4	GVGAV04.	5		
33.2	[redacted]	6	6	GVGAV02.	5		
26.9	[redacted]	5	5	GVGAJ03.(	5		
23.5	[redacted]	4	4	GVGAJ03.(	5		
26.9	[redacted]	5	5	GVGAJ03.(	5		
23.5	[redacted]	4	4	GVGAJ03.(	5		
26.4	[redacted]	5	5	GVGAJ03.(	5		
26.8	[redacted]	5	5	GVGAV04.	5		
26.8	[redacted]	5	5	GVGAV04.	5		
25	[redacted]	4	4	GVGAV04.	5		
24.9	[redacted]	4	4	GVGAJ03.(	5		
33.5	[redacted]	6	6	GVGAV02.	9		
33.5	[redacted]	6	6	GVGAV02.	9		
31.9	[redacted]	6	6	GVGAV02.	5		
23.7	[redacted]	4	4	GVGAV04.	5		
19.5	[redacted]	2	2	GVGAV06.	5		
21.9	[redacted]	3	3	GVGAV04.	5		

18.3	[redacted]	2	2 GVGAV06.	5
21.9		3	3 GVGAV04.	5
18.3		2	2 GVGAV06.	5
17.3		1	1 GVGAV06.	5
16.4		1	1 GVGAV06.	5
15		1	1 GVGAV06.	5
20.8		3	3 GVGAV05.	5
20.4		3	3 GVGAV05.	5
37.1		7	7 GVGAV02.	7
37.4		7	7 GVGAV02.	7
35.4		6	6 GVGAV02.	7
33.7		6	6 GVGAV02.	7
37.1		7	7 GVGAV02.	7
34.2		6	6 GVGAV02.	7
33.7		6	6 GVGAV02.	7
32.2		6	6 GVGAV02.	7
31.6		6	6 GVGAV02.	7
24.8		4	4 GVGAV03.	5
32.4		6	6 GVGAV02.	5
38.9		7	7 GVGAV02.	9
39.3		7	7 GVGAV02.	9
32.9		6	6 GVGAV02.	5
31.2		6	6 GVGAV02.	5
38.6		7	7 GVGAV02.	9
38.1		7	7 GVGAV02.	9
35.9		7	7 GVGAV02.	9
35.8		7	7 GVGAV02.	9
43.8		8	8 GVGAV01.	5
39.4		7	7 GVGAV02.	7
38.9		7	7 GVGAV02.	7
36.4		6	6 GVGAV02.	7
34.9		6	6 GVGAV02.	7
60.8		9	9 GVGAV01.	7
39.1		7	7 GVGAV02.	7
28.5		5	5 GVGAV03.	5
29.7		5	5 GVGAJ02.(	5
29.6		5	5 GVGAJ02.(	5
30.6		5	4 GVGAT03.(	5
25		4	4 GVGAT03.(	5

#3 Smog R #3 Mfr Sm #3 EPA Sm SmartWay #4 Smog R #4 Mfr Sm

GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
GVGAJ02.C	5
GVGAJ02.C	5

GVGAV02.I	5
GVGAV02.I	5
GVGAV02.I	5
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GVGAV02.I	5

[illegible]	You Save $	You Spend $	City CO2	Hwy CO2	Comb CO2	CO2- Volu	CO2- Volu	CO2-Vol In
	750		379	267	328			
	1000		362	256	314			
	250		379	280	334			
	750		366	271	323			
		250	371	303	341			
		1000	415	295	361			
		500	397	276	343			
		1250	424	303	370			
		1000	415	295	361			
		500	397	276	343			
	250		357	252	310			
		500	398	269	340			
		1250	436	296	373			
	500		403	270	343			
		1250	436	296	373			
	500		403	270	343			
	0		426	280	360			
		2250	473	303	397			
		2250	492	310	410			
		5500	640	403	534			
		1250	420	317	373			
		1750	451	313	389			
		1750	446	316	387			
		1750	452	322	393			
		250	430	328	385			
		2750	496	347	429			
		500	369	298	337			
		4750	614	355	497			
		500	381	289	340			
		2750	488	321	413			
		3500	519	341	439			
		2750	488	321	413			
		3500	519	341	439			
		2750	500	341	428			
		2750	497	332	423			
		2750	505	331	427			
		3500	534	331	442			
		4000	528	373	458			
	250		373	290	336			
	250		373	290	336			
		1000	386	323	358			
		4000	580	347	475			
		7500	710	421	580			
		5500	638	370	517			

	7500	736	443	604
	5500	638	370	517
	7500	736	443	604
	10000	791	491	656
	10000	836	481	676
	11500	887	532	727
	5500	617	429	532
	6500	634	442	547
1000		360	263	316
1000		358	261	314
750		373	282	332
250		385	292	343
1000		360	263	316
250		383	288	340
250		385	292	343
	1000	403	283	349
	1000	426	279	360
	2250	523	351	446
	1000	405	292	354
1250		352	247	305
1500		350	240	300
	500	383	294	343
	1000	406	289	354
1250		348	253	305
1250		358	248	309
1000		358	271	319
1000		355	258	311
2000		321	228	279
1250		350	245	302
1250		353	241	303
750		370	265	323
750		383	273	333
3500		212	184	200
1250		355	236	302
	750	449	319	390
	1750	431	344	392
	1750	435	344	394
	1500	502	356	437
	2750	520	391	462

[illegible]	[illegible]	[illegible]	[illegible]	240V Char	120V Char	PHEV Tota
309	191	255.9	378.7	267.1	328.5
289	188	243.6	362.1	255.5	314.1
305	200	257.8	378.6	280.1	334.3
294	198	250.8	366	271	323.2
292	199	250.2	371.2	303.3	340.6
327	210	274.4	415	295	361
320.1	202	267	396.8	276.4	342.5
335	216	281.4	424.4	303.1	369.8
327	210	274.4	415	295	361
320.1	202	267	396.8	276.4	342.5
278.5	178	233.3	357.1	251.9	309.8
312.5	191	257.8	397.9	269.4	340.1
345	211	284.7	436.2	296.4	373.3
326.3	193.3	266.4	402.7	270.5	343.2
345	211	284.7	436.2	296.4	373.3
326.3	193.3	266.4	402.7	270.5	343.2
339	198	275.6	425.6	280.1	360.1
376.5	225	308.3	473.4	302.9	396.7
396	226	319.5	492.3	309.7	410.1
515	310	422.8	640.3	403.3	533.6
331	226	283.8	419.7	316.6	373.3
357.5	223	297	451	312.5	388.7
357	230	299.9	445.6	315.7	387.1
358	230	300.4	451.6	321.9	393.2
348	231	295.4	430.5	328.5	384.6
390	251	327.4	496	347	429
380	223	309.4	369	298	337
499.5	269.5	396	613.8	354.8	497.3
311	214	267.4	381.4	289.2	339.9
396	248	329.4	488	321	412.8
443	266	363.4	519	341	438.9
396	248	329.4	488	321	412.8
443	266	363.4	519	341	438.9
401	256	335.8	500	341	428.4
403.5	241	330.4	496.9	331.8	422.6
407.5	238	331.2	505.4	331.1	427
444	243	353.6	534	330.6	442.5
427	269	355.9	528	372.7	458.1
307.9	216.6	266.8	373.4	289.6	335.6
307.9	216.6	266.8	373.4	289.6	335.6
314	233	277.6	385.7	323.4	357.7
462	263	372.4	580	347	475.2
576	314	458.1	709.5	420.8	579.6
511	278	406.2	638.3	369.6	517.4

617	333	489.2	736.3	442.9	604.3
511	278	406.2	638.3	369.6	517.4
617	333	489.2	736.3	442.9	604.3
645.5	355.5	515	791	490.9	656
705	353	546.6	836	481	676.2
756.1	403.3	597.3	887.1	532.1	727.4
512	328	429.2	616.6	428.8	532.1
521	336	437.8	633.8	441.8	547.4
280.8	185.9	238.1	360.4	262.6	316.4
278.4	185	236.4	357.6	261.3	314.3
291.1	200	250.1	372.6	281.5	331.6
309.3	204.2	262	384.6	292.2	343
280.8	185.9	238.1	360.4	262.6	316.4
299.7	204.7	257	382.8	287.9	340
309.3	204.2	262	384.6	292.2	343
327.3	207.8	273.5	402.7	282.8	348.8
346.5	203.1	282	426	279.1	359.9
434	265	358	523	351	445.6
321	213	272.4	404.7	291.7	353.9
274	174	229	352.4	246.5	304.7
272	169	225.6	350.1	239.8	300.5
314	217	270.4	383	294	343
334	223	284	406.3	289.2	353.6
270	179	229	347.7	253.3	305.2
279	175	232.2	358.3	247.9	308.6
288	195	246.2	358	270.7	318.7
294	191	247.7	354.6	257.9	311.1
245	154	204.1	320.6	227.7	278.8
271.8	172.5	227.1	349.8	244.5	302.4
274.4	170	227.4	352.9	241.2	302.6
288.6	188	243.3	369.7	265.4	322.8
305.8	189.6	253.5	382.9	272.9	333.4
155	136	146.4	212.1	184.3	199.6
276.4	166.4	226.9	355.3	236.3	301.8
372	238	311.7	449	319	390.5
340.8	246.4	298.3	431.3	344	392
343.8	246.3	299.9	434.9	343.9	393.9
401	248	332.2	502.3	356.5	436.7
416	281	355.2	520.1	390.6	461.8

[illegible]	[illegible]	[illegible]	Comb Vol Higher	Final Label	EPA_FUEL	EPA_GHG	EPA_AMT
		N	3.7	3.7			
		N	3.6	3.6			
		N	3.8	3.8			
		N	3.7	3.7			
		N	3.7	3.7			
		N	4	4			
		N	3.8	3.8			
		N	4.2	4.2			
		N	4	4			
		N	3.8	3.8			
		Y	3.6	3.6			
		Y	3.8	3.8			
		N	4.2	4.2			
		N	3.3	3.3			
		N	4.2	4.2			
		N	3.3	3.3			
		N	3.6	3.6			
		N	4.5	4.5			
		N	4.5	4.5			
		N	5.9	5.9			
		N	4.2	4.2			
		N	4.3	4.3			
		N	4.3	4.3			
		N	4.3	4.3			
		N	3.7	3.7			
		N	4.8	4.8			
		N	3.8	3.8			
		N	5.6	5.6			
		N	3.8	3.8			
		N	4.8	4.8			
		N	5	5			
		N	4.8	4.8			
		N	5	5			
		N	4.8	4.8			
		N	4.8	4.8			
		N	4.8	4.8			
		N	5	5			
		N	5.3	5.3			
		N	3.8	3.8			
		N	3.8	3.8			
		N	4	4			
		N	5.3	5.3			
		N	6.7	6.7			
		N	5.9	5.9			

N	6.7	6.7
N	5.9	5.9
N	6.7	6.7
N	7.7	7.7
N	7.7	7.7
N	8.3	8.3
N	5.9	5.9
N	6.2	6.2
N	3.6	3.6
N	3.6	3.6
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N	3.8	3.8
N	4	4
N	3.4	3.4
N	3.4	3.4
N	3.6	3.6
N	3.6	3.6
Y	3.1	3.1
N	3.4	3.4
N	3.4	3.4
N	3.7	3.7
N	3.7	3.7
N	2.3	2.3
N	3.4	3.4
N	4.3	4.3
N	4.3	4.3
N	4.3	4.3
N	4.2	4.2
N	5.3	5.3

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To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 9/3/2015 2:02:29 PM
Subject: RE: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Okay great, thank you. I get forgetful when I don't see that additional tab with EVs, but I didn't think there was an issue.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, September 03, 2015 9:54 AM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Subject: RE: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Richard,

The 2016 e-Golf is posted on the web---it didn't have any errors. I sent you the data on 8/20/2015 for your review for the 2016 Printed Guide---copy attached. It's in a different tab from the conventional vehicles.

Dave

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, September 03, 2015 7:35 AM
To: Good, David
Subject: RE: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Hi Dave;

I noticed that I have not seen the BEV Volkswagen e-Golf on your spreadsheet listing since the end of July. You told me to ignore the e-Golf errors in your mail of July 29th. I assume everything is okay with this label #086, correct? It was a carried over from 2015, with only a change to the electricity unit price to $0.13 per kW-hr from $0.12. And, as I told you we made the 240V charge time a bit more definitive at 3.7 hours instead of 4 hours.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, September 02, 2015 5:28 PM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Subject: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Richard,

Per your voicemail. Thanks for fixing the error.

Dave

To: Washington, Debra[Washington.Debra@epa.gov]
From: Belser, Evan
Sent: Thur 9/3/2015 3:21:08 PM
Subject: FW: Paper for Cynthia on Volkswagen Matter
VW Initial Briefing 9 3 15.docx

From: Kaul, Meetu
Sent: Tuesday, September 01, 2015 12:29 PM
To: Washington, Debra
Cc: Belser, Evan
Subject: Paper for Cynthia on Volkswagen Matter

Hi Debra,

Susan signed off on sharing this paper with Cynthia for this Thursday's general.

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Belser, Evan
Sent: Monday, August 31, 2015 9:55 PM
To: Washington, Debra; Shinkman, Susan
Cc: Brooks, Phillip; Werner, Jacqueline; Kaul, Meetu; Orehowsky, Gregory
Subject: VW Paper for Susan, Cynthia

Debra and Susan,

Please find attached a briefing paper for the VW matter for tomorrow's AED General. We will bring hard copies.

Thanks,

Evan

From: Brooks, Phillip
Required Attendees: Meetu Kaul; Evan Belser; Orehowsky, Gregory; Werner, Jacqueline
Importance: Normal
Subject: VW call
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 9/3/2015 7:29:53 PM
Subject: P.M. NEWSCAST: Jaguar tries lower prices, free maintenance | Benz takes aim at Tesla, Debut set for Model 3 | The next VW chairman? | Labor Day bargain buys

September 3, 2015

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 9/3/2015 7:30:15 PM
Subject: P.M. NEWSCAST: Jaguar tries lower prices, free maintenance | Benz takes aim at Tesla, Debut set for Model 3 | The next VW chairman? | Labor Day bargain buys

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customerservice@autonews.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 9/3/2015 8:38:54 PM
Subject: DAILY: VW finance chief Poetsch proposed as next chairman | TrueCar inks deal with Sam's | NGK Insulators to pay $65.3M fine for price-fixing | Jaguar's price cut plans | Takata settles patent case

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TrueCar inks partner deal with Sam's Club

TrueCar gained a key ally today with the announcement that it will partner with Sam's Club to offer members access to a new-car buying program. The Auto Buying Program will allow Sam's Club -- a membership-only warehouse division of Wal-Mart Stores Inc. -- to offer targeted savings through TrueCar on specific brands.

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NGK Insulators to pay $65.3 million U.S. fine for price-fixing, obstruction

Japanese auto supplier NGK Insulators has agreed to plead guilty and pay a $65.3 million fine for fixing prices of automotive parts and attempting to obstruct the ongoing global investigation into auto parts bid rigging, the U.S. Department of Justice said today.

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Jaguar settles Takata maintenance cases for U.S. airbag sensors

Jaguar is lowering its prices and rolling out free scheduled maintenance in the United States to remove what customers cite as key reasons consumers reject the British brand: high purchase and maintenance costs.

Two units of Japanese auto supplier Takata are settling a six-year patent infringement dispute with International Electronics & Engineering and its Detroit area subsidiary for $1.1 million.

Mercedes is working on Tesla Model S fighter, r&d chief tells paper

Tesla will begin deliveries of Model X on Sept. 29

Ex-Tesla engineer charged with illegally accessing employee

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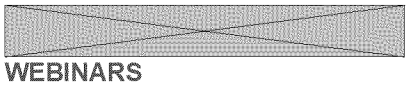

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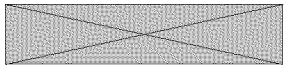

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 9/3/2015 8:39:16 PM
Subject: DAILY: VW finance chief Poetsch proposed as next chairman | TrueCar inks deal with Sam's | NGK Insulators to pay $65.3M fine for price-fixing | Jaguar's price cut plans | Takata settles patent case

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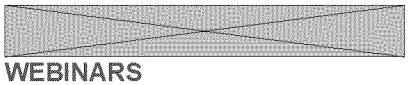

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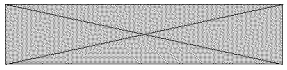
by DMEautomotive



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From: Kaul, Meetu
Importance: Normal
Subject: VW call with ECS, EES, OCEFT
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Orehowsky, Gregory
Sent: Fri 9/4/2015 10:53:17 AM
Subject: Automatic reply: VW Diesel Presentation (Thr Meeting 3-Sept)

I will be out of the office until Tuesday September 8

From: Giles-AA, Cynthia
Required Attendees: Shinkman, Susan; Kelley, Rosemarie; Brooks, Phillip
Location: 3204WJC
Importance: Normal
Subject: Volkswagen
Start Date/Time: Fri 9/4/2015 5:30:00 PM
End Date/Time: Fri 9/4/2015 6:00:00 PM

From: Bailey, Ethel
Required Attendees: Shinkman, Susan; Kelley, Rosemarie; Brooks, Phillip
Location: 3204WJC
Importance: Normal
Subject: Volkswagen
Start Date/Time: Fri 9/4/2015 5:30:00 PM
End Date/Time: Fri 9/4/2015 6:00:00 PM

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Werner, Jacqueline
Sent: Fri 9/4/2015 2:45:01 PM
Subject: RE: VW

11-11:15, sure. If not, let's catch up after 2.

Thanks,

jj

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

From: Kaul, Meetu
Sent: Friday, September 04, 2015 10:39 AM
To: Werner, Jacqueline
Subject: RE: VW

Ex. 5

Can I call you afterward? (around 11-11:30)

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Werner, Jacqueline
Sent: Friday, September 04, 2015 10:37 AM
To: Kaul, Meetu
Subject: VW

Do you have time to talk? **Ex. 5**

Thanks,

jj

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Kaul, Meetu
Sent: Fri 9/4/2015 3:35:10 PM
Subject: RE: VW

Call just ended. Feel free to call me at 2:00 or whenever you are free. I don't have any other calls scheduled for today.

I'm a **Ex. 6**

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Werner, Jacqueline
Sent: Friday, September 04, 2015 10:45 AM
To: Kaul, Meetu
Subject: RE: VW

11-11:15, sure. If not, let's catch up after 2.

Thanks,

jj

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

From: Kaul, Meetu
Sent: Friday, September 04, 2015 10:39 AM
To: Werner, Jacqueline
Subject: RE: VW

Ex. 5, 7

Can I call you afterward? (around 11-11:30)

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)

Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Werner, Jacqueline
Sent: Friday, September 04, 2015 10:37 AM
To: Kaul, Meetu
Subject: VW

Do you have time to talk? I want to know how it went with Cynthia yesterday.

Thanks,

jj

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 9/4/2015 7:25:53 PM
Subject: P.M. NEWSCAST: Seeking the next Sergio | Nissan Versa recall | Ford, VW Russia plans | Labor of Corvette love | Marathons and Priuses

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 9/4/2015 7:26:20 PM
Subject: P.M. NEWSCAST: Seeking the next Sergio | Nissan Versa recall | Ford, VW Russia plans | Labor of Corvette love | Marathons and Priuses

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 9/4/2015 8:10:00 PM
Subject: DAILY: Marchionne's GM merger push may wait for Ferrari spinoff | Toyota's bid for artificial intelligence | Nissan to recall 300k cars | The latest on UAW talks | Dodge joins Star Wars hype machine

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September 4, 2015

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NEWS ANALYSIS

Marchionne's Fiat-GM merger plan may wait for Ferrari spinoff

While Fiat Chrysler Automobiles CEO Sergio Marchionne isn't known for his patience, he's likely to wait until next year before making a bid for General Motors after months of talk about the potential of a deal.

Toyota invests $50 million in artificial intelligence for smarter cars

Seeking to make cars better at avoiding crashes, Toyota will spend $50 million over five years to set up joint research centers at the Massachusetts Institute of Technology and Stanford University, the Japanese automaker said today.

MOST READ (Last 7 days)

Jeep Wrangler to stay in Toledo, Cherokee leaving, Wrangler-based pickup coming
Sales edge

Advertisement

Nissan to recall 300,000 small cars; NHTSA upgrades investigation into seat sensors

Nissan North America is recalling nearly 300,000 small cars over concerns that an interior trim panel near the accelerator pedal could trap a driver's foot, possibly causing unwanted acceleration or delaying braking.

down but SAAR soars to 17.81 million
GM's Duramax V-8 engine to power U.S. Army's Humvee replacement
Marchionne waits at the gate, but who is there to answer?
Maserati dealer sues factory, alleging padded sales

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Detroit 3 automakers eye quick contract talks

The Detroit 3 automakers will quickly begin contract talks with the United Auto Workers union after the ratification of a new four-year labor agreement with Fiat Chrysler Automobiles NV, which replaces one that expires Sept. 14.

Ford to close Lima, Ohio, engine plant; 1,200 workers affected

The Detroit automaker will close its Lima Ford engine plant near Cleveland, said in a YouTube video.

Dodge joins the Star Wars promotional blitz with Stormtrooper Chargers

China auto sales will stagnate for two years, firm predicts

Wireless car updates to save billions, transform service experience, IHS predicts

Jaguar F-Pace teaser picture shows SUV's shape

Bentley says its new Bentayga will be the world's fastest SUV

VW's unassuming CFO emerges from boardroom wars as chairman

VW, Ford open engine plants in Russia amid car market plunge

BLOG: CHRISTIAAN HETZNER

Piech gets his way by blocking Winterkorn as his successor

Continental's CFO calls China stock effect an 'overreaction'

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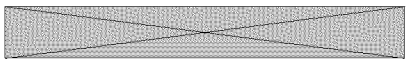

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» Sept. 22 - NY Marketing Seminar

» Oct. 1 - Automobilwoche Kongress

» Oct. 14 - Best Dealerships To Work For

» Jan. 12 - Automotive News World Congress

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» Sept. 10 at 2pm ET - Buyer Detection
by Outsell

» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

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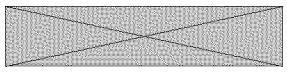

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 9/4/2015 8:10:17 PM
Subject: DAILY: Marchionne's GM merger push may wait for Ferrari spinoff | Toyota's bid for artificial intelligence | Nissan to recall 300k cars | The latest on UAW talks | Dodge joins Star Wars hype machine

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September 4, 2015

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Detroit 3 automakers eye quick contract talks

The Detroit automakers will quickly begin contract talks with the United Auto Workers union after the ratification of a tentative agreement with Fiat Chrysler Automobiles NV's Jeep brand on Tuesday, a sign that could help avert a strike at Ford Motor Co. and General Motors Co. plants when the labor contracts expire Sept. 14.

Dodge joins the Star Wars promotional blitz with Stormtrooper Chargers

China auto sales will stagnate for two years, firm predicts

Wireless car updates to save billions, transform service experience, IHS predicts

Ford to speed up new engine launches

UAW vice president Jimmy Settles, who represents workers at a Ford engine plant near Cleveland, said in a YouTube video.

Ford overhaul idea

UAW negotiators said they will bring their contract talks with FCA to a close that could help speed the launch of new products, Mark Reuss, president of GM North America, said in a statement.

Jaguar F-Pace teaser picture shows SUV's shape

Bentley says its new Bentayga will be the world's fastest SUV

VW's unassuming CFO emerges from boardroom wars as chairman

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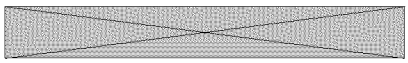

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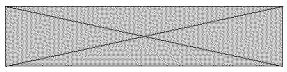

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From: Ex. 5, 7
Location: Call
Importance: Normal
Subject: VW
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

;

Non-Responsive

Ex. 5, 7

Location: Call
Importance: Normal
Subject: VW
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

.

Non-Responsive

To: Bunker, Byron[bunker.byron@epa.gov]; Cook, Leila[cook.leila@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]
From: Hengst, Benjamin
Sent: Fri 9/4/2015 11:08:13 PM
Subject: Fwd: VW

FYI.

Begin forwarded message:

From: "McCabe, Janet" <McCabe.Janet@epa.gov>
Date: September 4, 2015 at 6:40:14 PM EDT
To: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Grundler, Christopher" <grundler.christopher@epa.gov>
Subject: VW

We need to talk about this soon after Chris and I get back. talk to me asap next week.

Ex. 7

To: McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]
From: Hengst, Benjamin
Sent: Fri 9/4/2015 11:46:11 PM
Subject: Re: VW

Got it. We will have an update ready.

On Sep 4, 2015, at 6:40 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:

> We need to talk about this soon after Chris and I get back. Cynthia is wanting to talk to me asap next week.

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Neil Steinkamp
Sent: Tue 9/8/2015 12:06:52 PM
Subject: RE: Docket for defect reports and recall reports

3 p.m. Friday works for me. I'll call you then.

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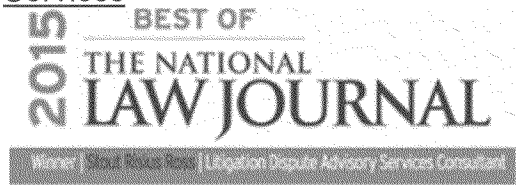

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Tuesday, September 08, 2015 7:53 AM
To: Neil Steinkamp
Subject: RE: Docket for defect reports and recall reports

Could you do any earlier on Friday? Perhaps 3 pm?

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Neil Steinkamp [mailto:nsteinkamp@srr.com]
Sent: Tuesday, September 08, 2015 7:50 AM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Would Friday afternoon at 4 p.m. work for you?

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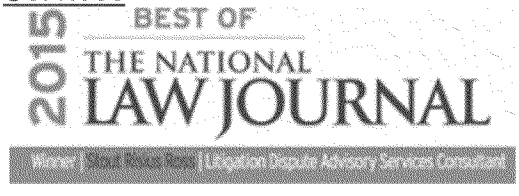

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Tuesday, September 08, 2015 7:39 AM
To: Neil Steinkamp
Subject: RE: Docket for defect reports and recall reports

Neil,

How about Thursday afternoon or Friday?

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Neil Steinkamp [mailto:nsteinkamp@srr.com]
Sent: Friday, September 04, 2015 4:05 PM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Linc – we've been working to try to revisit the data you provided and reconcile it to the reports produced by the EPA for 2009 - 2011. We've made progress and have narrowed the differences. However there are still notable deviations between the reported numbers and our analysis, which may also impact how we are interpreting the data from 2012 – 2014.

Would you have time next week to discuss?

Regards,

Neil Steinkamp, CVA, CCA
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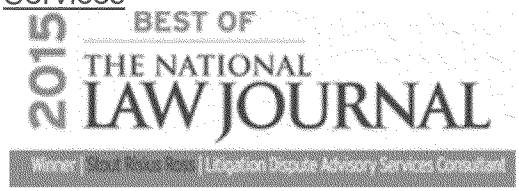

From: Neil Steinkamp
Sent: Thursday, August 13, 2015 9:21 AM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Linc – are you available at 9 a.m. EST tomorrow?

-Neil

Neil Steinkamp, CVA, CCA
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From: Neil Steinkamp
Sent: Monday, August 10, 2015 2:03 PM

To: 'Wehrly, Linc'
Subject: RE: Docket for defect reports and recall reports

Linc – are you available for a brief call this afternoon.

Neil Steinkamp, CVA, CCA
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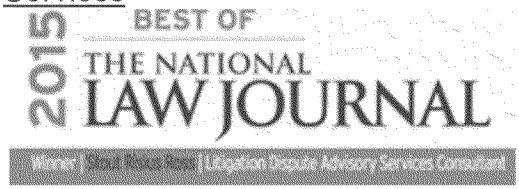

From: Neil Steinkamp
Sent: Friday, August 07, 2015 10:17 AM
To: 'Wehrly, Linc'
Subject: RE: Docket for defect reports and recall reports

Perfect. I'll call you then.

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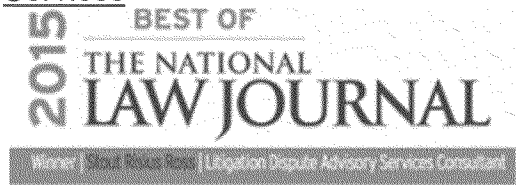

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Friday, August 07, 2015 9:49 AM
To: Neil Steinkamp
Subject: RE: Docket for defect reports and recall reports

How about Monday at 2 pm?

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Neil Steinkamp [mailto:nsteinkamp@srr.com]
Sent: Friday, August 07, 2015 8:24 AM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Linc – is there a time next week when we could reschedule our call?

Neil Steinkamp, CVA, CCA
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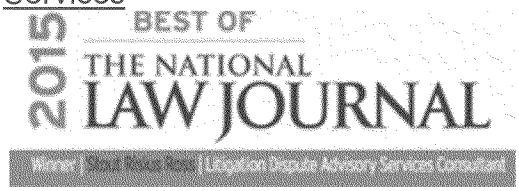

From: Neil Steinkamp
Sent: Friday, July 31, 2015 3:18 PM
To: 'Wehrly, Linc'
Subject: RE: Docket for defect reports and recall reports

Linc – I left you a voicemail a moment ago. My call went long (instead of short). Do you still have time this afternoon?

Neil Steinkamp, CVA, CCA
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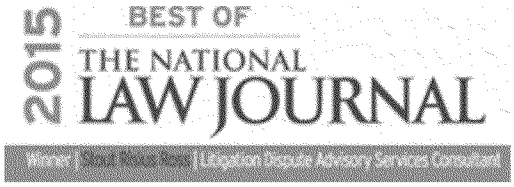

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Wednesday, July 29, 2015 9:55 AM
To: Neil Steinkamp
Subject: RE: Docket for defect reports and recall reports

As long as we keep it to ½ hour.

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Neil Steinkamp [mailto:nsteinkamp@srr.com]
Sent: Wednesday, July 29, 2015 8:48 AM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Any chance Friday at 3 p.m. EST would work?

Neil Steinkamp, CVA, CCA
Managing Director | Dispute Advisory & Forensic Services
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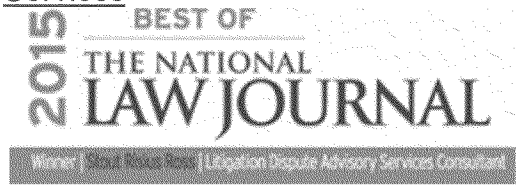

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Wednesday, July 29, 2015 8:46 AM
To: Neil Steinkamp
Subject: RE: Docket for defect reports and recall reports

Neil,

How about Friday afternoon around 2 pm?

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Neil Steinkamp [mailto:nsteinkamp@srr.com]
Sent: Tuesday, July 28, 2015 9:53 PM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Linc,

Is there a time this week when we can discuss this?

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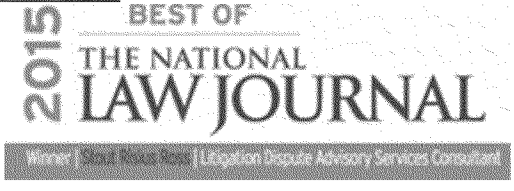

From: Neil Steinkamp
Sent: Sunday, July 05, 2015 7:58 AM
To: 'Wehrly, Linc'
Subject: RE: Docket for defect reports and recall reports

Linc,

I hope all is well. Would you have time to discuss this coming week?

Regards,

Neil Steinkamp, CVA, CCA
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From: Neil Steinkamp
Sent: Wednesday, June 17, 2015 3:33 PM
To: 'Wehrly, Linc'
Subject: RE: Docket for defect reports and recall reports

Linc – attached is what our analysis shows at this time.

Neil Steinkamp, CVA, CCA

Managing Director | Dispute Advisory & Forensic Services

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From: Neil Steinkamp
Sent: Wednesday, June 17, 2015 3:29 PM
To: 'Wehrly, Linc'
Subject: RE: Docket for defect reports and recall reports

Absolutely – just let me know what time next week works best for you.

Neil Steinkamp, CVA, CCA

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From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Wednesday, June 17, 2015 3:28 PM
To: Neil Steinkamp
Subject: RE: Docket for defect reports and recall reports

Neil,

I will be out of the office the rest of the week, so perhaps we could talk sometime next week. I will need some time to discuss this with my staff to see what answers we may have.

Regards,

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Neil Steinkamp [mailto:nsteinkamp@srr.com]
Sent: Wednesday, June 17, 2015 3:11 PM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Linc,

I hope all is well. We've had a chance to compile the information your team sent. I have a couple follow up questions and was hoping you might have a few minutes this week when we could discuss. For example:

- The annual totals and OEM totals from 2009 – 2011 that are presented on page 30 in the EPA's Vehicle Engine & Compliance Activities Report (2009-2011 Compliance Report) are significantly different than the numbers reflected in the information you provided (for every year – 2009-2011). I'm wondering what might be causing the differences.

- Our data set shows a dramatic decline in recalls in 2012 (which remains low in 2013 and 2014). I'm wondering if there was something specific that might be causing this. Nearly all of the recalled volumes in 2014 were related to just two OEMs (with many having no recalled volumes at all). I just wanted to confirm that this was accurate, and that we aren't missing any information.

Let me know if you would have a few minutes to discuss later this week.

Regards,

Neil Steinkamp, CVA, CCA

Managing Director | Dispute Advisory & Forensic Services

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From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Tuesday, May 19, 2015 2:39 PM
To: Neil Steinkamp
Subject: RE: Docket for defect reports and recall reports

Neil,

I'm sorry. I'm the manager and "technical expert" not the FOIA process guy. I've been told it should be out soon. I will try to make sure they expedite it.

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Neil Steinkamp [mailto:nsteinkamp@srr.com]
Sent: Monday, May 18, 2015 5:53 PM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Linc – we have not yet received these materials. Do you know if they are still en route?

Neil Steinkamp, CVA, CCA

Managing Director | Dispute Advisory & Forensic Services

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From: Neil Steinkamp
Sent: Tuesday, May 12, 2015 10:24 PM
To: 'Wehrly, Linc'
Subject: RE: Docket for defect reports and recall reports

Thank you Linc. Very much appreciated. I will let you know if I have any questions.

Neil Steinkamp, CVA, CCA

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From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Tuesday, May 12, 2015 9:55 AM
To: Neil Steinkamp
Subject: RE: Docket for defect reports and recall reports

Neil,

You should be receiving a DVD with the 2011-2014 recall reports in the next couple of days. A couple of notes:

- There were a handful of reports that were marked CBI, so we need to follow-up with the different manufacturers to see if they can substantiate the CBI claim, provide a FOIA version or allow us to release the reports as they are
- Volvo did not have any reports for this timeframe

Please let me know if you have any other questions.

Regards,

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Neil Steinkamp [mailto:nsteinkamp@srr.com]
Sent: Tuesday, May 05, 2015 7:12 PM
To: Wehrly, Linc
Subject: RE: Docket for defect reports and recall reports

Thanks Linc,

For the 2011-2014 recalls, we would like to request information only for the following OEMs:

BMW
Chrysler
Ford
General Motors
Honda
Hyundai
Mazda
Mitsubishi
Nissan
Toyota
Volkswagen
Volvo

Neil Steinkamp, CVA, CCA

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From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Tuesday, May 05, 2015 4:14 PM
To: Neil Steinkamp
Subject: Docket for defect reports and recall reports

Neil,

Here is the Docket information for the emissions defect reports and voluntary emissions recall reports that we discussed earlier. I hope this is helpful.

Go to www.regulations.gov and do a search on the docket number.

EPA-OAR-HQ-2005-0113 for Defects

EPA-OAR-HQ-2005-0114 for Recalls

Regards,

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Tue 9/8/2015 12:47:10 PM
Subject: VOLKSWAGEN BRANDS' FUTURE PRODUCT: Platform shift drives product plans | Crossovers, derivatives fill VW pipeline | New powertrains, styling for Porsche | New Audi styling, tech

Upcoming products from Audi, Porsche and Volkswagen | View this email in a browser

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Week eight in our nine-week Future Product Pipeline series tracks changes to the upcoming U.S. product portfolios of the Audi, Porsche and Volkswagen brands.

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THIS WEEK: Audi, Porsche and Volkswagen

Platform shift drives product plans at VW brands

The next wave of products from Germany's Volkswagen AG will bring new styling, technology and powertrain choices to the group's top three U.S. brands, and usher in a host of variants made possible by a shift to a new family of flexible global platforms.

Crossovers, derivatives fill VW pipeline

Volkswagen may be late to the crossover party, but it intends to make a grand entrance in 2017.

Porsche offers new powertrains, body styles

Porsche continues to focus on more fuel efficiency balanced by increased power. Expect smaller engines and more turbocharging, plug-in hybrids, and new body styles, such as a Cayenne coupe and a Panamera wagon.

Audi product blitz will usher in new styling, tech

Audi will continue its crossover and technology offensive for the foreseeable future while rolling out a new design language to its entire lineup by the end of the decade.

See Future Product

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.

To: Bunker, Byron[bunker.byron@epa.gov]
From: Brooks, Phillip
Sent: Tue 9/8/2015 2:11:56 PM
Subject: Will you have 5 minutes today to discuss VW?

Sent from my iPhone

To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/8/2015 2:47:05 PM
Subject: Can you forward to me invitation for 2:00pm VW call with DOJ (EES and ECS) from Phill's calendar?

Thanks

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Bunker, Byron[bunker.byron@epa.gov]
From: Brooks, Phillip
Sent: Tue 9/8/2015 2:50:31 PM
Subject: Re: Will you have 5 minutes today to discuss VW?

I will call you at 12:30pm. Thank you.

Sent from my iPhone

> On Sep 8, 2015, at 10:49 AM, Bunker, Byron <bunker.byron@epa.gov> wrote:
>
> For you, of course.
>
> I am free for the next 10 minutes (until 11) and also 12:30 - 1:00 and 2-3 and after 5. Let me know if any of those times can work for you.
>
> Thanks,
>
> Byron
>
> **********
> Byron Bunker
> Director Compliance Division
> Office of Transportation and Air Quality
> Environmental Protection Agency
> 2000 Traverwood Drive
> Ann Arbor, MI 48105
> Bunker.Byron@epa.gov
> Phone: (734) 214-4155
> Mobile: (734) 353-9623
> **********
>
> -----Original Message-----
> From: Brooks, Phillip
> Sent: Tuesday, September 08, 2015 10:12 AM
> To: Bunker, Byron
> Subject: Will you have 5 minutes today to discuss VW?
>
>
>
> Sent from my iPhone

To: Belser, Evan[Belser.Evan@epa.gov]; Fried, Gregory[Fried.Gregory@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Chapman, Apple[Chapman.Apple@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Thompson, Christopher
Sent: Tue 9/8/2015 3:00:01 PM
Subject: RE: Agenda items for internal

Ex. 7

From: Belser, Evan
Sent: Tuesday, September 08, 2015 8:54 AM
To: Fried, Gregory; Brooks, Phillip; Chapman, Apple; Werner, Jacqueline; Thompson, Christopher
Subject: RE: Agenda items for internal

MSEB: V&E

- VW

Ex. 7

From: Fried, Gregory
Sent: Tuesday, September 08, 2015 9:47 AM
To: Brooks, Phillip; Chapman, Apple; Werner, Jacqueline; Belser, Evan; Thompson, Christopher
Subject: Agenda items for internal

Please send them my way.

Gregory Fried

Chief, Stationary Source Enforcement Branch

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

202-564-7016

fried.gregory@epa.gov

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Werner, Jacqueline
Sent: Tue 9/8/2015 3:11:59 PM
Subject: Re: Can you forward to me invitation for 2:00pm VW call with DOJ (EES and ECS) from Phill's calendar?

Sure.

Thx,
jj

Sent from my iPhone
Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

On Sep 8, 2015, at 10:47 AM, Kaul, Meetu <Kaul.Meetu@epa.gov> wrote:

Thanks

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Werner, Jacqueline
Importance: Normal
Subject: Accepted: VW call
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

From: Brooks, Phillip
Required Attendees: Meetu Kaul; Evan Belser; Orehowsky, Gregory; Werner, Jacqueline
Importance: Normal
Subject: VW call
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

From: Brooks, Phillip
Required Attendees: Meetu Kaul; Evan Belser; Orehowsky, Gregory; Werner, Jacqueline
Importance: Normal
Subject: VW call
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

From: Belser, Evan
Importance: Normal
Subject: Accepted: VW call
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

From: Orehowsky, Gregory
Importance: Normal
Subject: Accepted: VW call
Start Date/Time: Tue 9/8/2015 6:00:00 PM
End Date/Time: Tue 9/8/2015 7:00:00 PM

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 9/8/2015 7:40:53 PM
Subject: P.M. NEWSCAST: Why Golf is on an upswing; VW future product | Mazda appoints new N.A. design head | Rolls previews Dawn | Civic Type R spy shots | Land Cruiser's new look

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From: Automotive News
Sent: Tue 9/8/2015 7:41:11 PM
Subject: P.M. NEWSCAST: Why Golf is on an upswing; VW future product | Mazda appoints new N.A. design head | Rolls previews Dawn | Civic Type R spy shots | Land Cruiser's new look

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 9/8/2015 8:34:55 PM
Subject: DAILY: Why UAW talks will turn on Tier 2 resolution | Mazda taps Montousse to lead Calif. design studio | Should AutoNation's recall policy become law? | Rolls-Royce aims for younger buyers

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UAW talks will turn on Tier 2 resolution

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Mazda taps Montousse to lead Calif. design studio

Mazda tapped Julien Montousse, an interior design specialist known for crafting the cockpit-like interiors of the Mazda6 sedan and the MX-5 Miata roadster, to lead its U.S. design studio in California.

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AutoNation's declaration that it won't sell a vehicle that has an open recall may prompt renewed calls to make that policy the law of the land. Such a law would be a mistake, at least under our current system of government recalls.

stay in Toledo, Cherokee leaving; Wrangler-based pickup coming

Jaguar offers free maintenance, cuts prices in U.S.

UAW negotiators pledge they'll prevail in Ford contract talks

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Rolls-Royce reveals Dawn convertible at younger buyers

Rolls-Royce released pictures and details of its Dawn convertible ahead of the car's unveiling at the Frankfurt auto show. The Dawn is aimed at attracting more younger buyers and more women to the ultra-luxury brand.

Rolls-Royce has released a teaser picture showing a Dawn convertible ahead of the car's unveiling next week at the Frankfurt Auto Show. Reports say the concept will preview a new direction for the automaker's Z sports car subbrand.

Porsche adds turbocharging to make the 911 greener

Lexus sheds safe playbook with RX redesign

Ford GT stars in 'Forza Motorsport 6' video game ad

Ford Mustang sales rise globally, show gains with U.S. women

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GM, Ford, Nissan see China sales drop in August

AutoNation to launch $16M ad campaign for cancer research, bowl game

Ford UAW workers authorize strike

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Nissan plays yo-yo purchasing amid yen's wild ride

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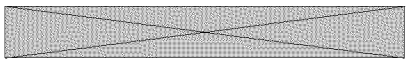

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» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
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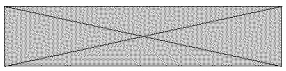
» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive



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From: Automotive News
Sent: Tue 9/8/2015 8:35:14 PM
Subject: DAILY: Why UAW talks will turn on Tier 2 resolution | Mazda taps Montousse to lead Calif. design studio | Should AutoNation's recall policy become law? | Rolls-Royce aims for younger buyers

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AutoNation's declaration that it won't sell a vehicle that has an open recall may prompt renewed calls to make that policy the law of the land. Such a law would be a mistake, at least under our current system of government recalls.

stay in Toledo, Cherokee leaving; Wrangler-based pickup coming

Jaguar offers free maintenance, cuts prices in U.S.

UAW negotiators pledge they'll prevail in Ford contract talks

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2015 FRANKFURT AUTO SHOW

Rolls-Royce reveals Dawn convertible at younger buyers

Rolls-Royce released pictures and details of its Dawn convertible ahead of the car's unveiling at the Frankfurt auto show. The Dawn is aimed at attracting more younger buyers and more women to the ultra-luxury brand.

Rolls-Royce has released a teaser picture showing a Dawn convertible ahead of the car's unveiling next week at the Frankfurt Auto Show. Reports say the concept will preview a new direction for the automaker's Z sports car subbrand.

Porsche adds turbocharging to make the 911 greener

Lexus sheds safe playbook with RX redesign

Ford GT stars in 'Forza Motorsport 6' video game ad

Ford Mustang sales rise globally, show gains with U.S. women

Like? Dislike? Barra's blue talk on Facebook page

GM, Ford, Nissan see China sales drop in August

AutoNation to launch $16M ad campaign for cancer research, bowl game

Ford UAW workers authorize strike

BLOG: **HANS GREIMEL**

Nissan plays yo-yo purchasing amid yen's wild ride

Marchionne says desired tie-up with GM 'high priority'

Lexus to offer direct line to dealer service

Piech stopped Winterkorn becoming VW chairman, reports say

FCA to recall 7,810 SUVs to prevent hacking

Mahindra said to be close to purchase of Pininfarina

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UPCOMING ...

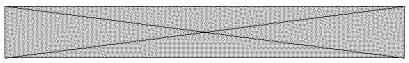
EVENTS

» Sept. 22 - NY Marketing Seminar

» Oct. 1 - Automobilwoche Kongress

» Oct. 14 - Best Dealerships To Work For

» Jan. 12 - Automotive News World Congress



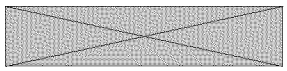
WEBINARS

» Sept. 10 at 2pm ET - Buyer Detection
by Outsell

» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive



» F&I Practices: How to Stay Out of Jail!

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customerservice@autonews.com

To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Belser, Evan
Sent: Tue 9/8/2015 9:44:42 PM
Subject: FW: VW Coordination

FYI

From: Ex. 7
Sent: Tuesday, September 08, 2015 5:44 PM
To: Belser, Evan
Subject: RE: VW Coordination

Hi Evan, we have some internal meetings tomorrow, so I should know more then. I will give you a call afterwards. Thanks

Ex. 7

PRIVILEGED - CONFIDENTIAL - DELIBERATIVE PROCESS – DO NOT CITE OR QUOTE

The foregoing electronic message, together with any attachments thereto, is confidential and may

be legally privileged against disclosure other than to the intended recipient. It is intended solely for the addressee(s) and access to the message by anyone else is unauthorized. If you are not the intended recipient of this electronic message, you are hereby notified that any dissemination, distribution, or any action taken or omitted to be taken in reliance on it is strictly prohibited and may be unlawful. If you have received this electronic message in error, please delete and immediately notify the sender of this error.

From: Belser, Evan [mailto:Belser.Evan@epa.gov]
Sent: Tuesday, September 08, 2015 7:53 AM
To: Ex. 7
Subject: VW Coordination

Hello Ex. 7

Ex. 5, 7

Please let me know your thoughts.

Thanks,
Evan

Evan Belser

Acting Chief, Mobile Source Enforcement Branch, Air Enforcement Division

National Coordinator for Administrative Litigation, Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

202-564-6850

Do not release this email. This is confidential attorney-client communication and privileged attorney work product created for law enforcement purposes.

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7
Sent: Tue 9/8/2015 10:39:20 PM
Subject: RE: Time to talk VW?

Am available now???

Ex. 7

Emissions Compliance, Automotive Regulations and Science (ECARS) Division

California Air Resources Board

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Tuesday, September 08, 2015 2:38 PM
To: Ex. 7
Subject: Time to talk VW?

Hi **Ex. 7**

Do you have time tomorrow (or yet today) that we could talk VW for a few minutes? Best times for me tomorrow are 11 or 2 EDT.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: McCabe, Janet
Sent: Tue 9/8/2015 11:11:02 PM
Subject: RE: Ex. 7

I noted that too.

Are you available for a call yet tonight re VW? I'm sure you're more up to speed than I am, and just need to get a better understanding of some basic information and ongoing and next steps.

I'm still at the office, and expect to be for a while. At least until 8 or so, but can also talk even later on the cell.

Thanks, Chris.

Non-Responsive

Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Ex. 7 @ARB[Ex. 7]
From: Bunker, Byron
Sent: Tue 9/8/2015 11:40:03 PM
Subject: Re: Time to talk VW?

8:15 sounds good to me. Should I call you?

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Cell Phone (734) 353-9623

Sent from my cell phone.

On Sep 8, 2015, at 6:44 PM, Ex. 7 @arb.ca.gov> wrote:

> Actually 8 PDT works for me. Or 815 after coffee prep/
>
> **Ex. 7**
>
> California Air Resources Board
>
> Ex. 7
>
> Ex. 7 @arb.ca.gov
>
> **From:** Bunker, Byron [mailto:bunker.byron@epa.gov]
> **Sent:** Tuesday, September 08, 2015 2:38 PM
> **To:** Ex. 7 @ARB
> **Subject:** Time to talk VW?
>
> Hi **Ex. 7**
>
> Do you have time tomorrow (or yet today) that we could talk VW for a few minutes? Best

times for me tomorrow are 11 or 2 EDT.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7
Sent: Tue 9/8/2015 11:40:33 PM
Subject: RE: Time to talk VW?

Yep.

Ex. 7

Emissions Compliance, Automotive Regulations and Science (ECARS) Division

California Air Resources Board

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Tuesday, September 08, 2015 4:40 PM
To: Ex. 7
Subject: Re: Time to talk VW?

8:15 sounds good to me. Should I call you?

Byron Bunker

US EPA

NVFEL Office Phone (734) 214-4155

DC Office Phone (202) 343-9283

Cell Phone (734) 353-9623

Sent from my cell phone.

On Sep 8, 2015, at 6:44 PM, Ex. 7 wrote:

Actually 8 PDT works for me. Or 815 after coffee prep/

Ex. 7

Emissions Compliance, Automotive Regulations and Science (ECARS) Division

California Air Resources Board

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Tuesday, September 08, 2015 2:38 PM
To: Ex. 7
Subject: Time to talk VW?

Hi Ex. 7

Do you have time tomorrow (or yet today) that we could talk VW for a few minutes? Best times for me tomorrow are 11 or 2 EDT.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: McCabe, Janet[McCabe.Janet@epa.gov]
From: Grundler, Christopher
Sent: Wed 9/9/2015 12:02:43 AM
Subject: Re: POET

Sure. Just finished dinner. Feel free to call Ex. 6

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 8, 2015, at 7:11 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:
>

Non-Responsive

> Are you available for a call yet tonight re VW? I'm sure you're more up to speed than I am, and just need to get a better understanding of some basic information and ongoing and next steps.
>
> I'm still at the office, and expect to be for a while. At least until 8 or so, but can also talk even later on the cell.
>
> Thanks, Chris.
>
> -----Original Message-----
> From: Grundler, Christopher
> Sent: Tuesday, September 08, 2015 6:00 PM
> To: McCabe, Janet
> Cc: Hengst, Benjamin
> Subject: R Non-Responsive
>

Non-Responsive

> Christopher Grundler, Director
> Office of Transportation and Air Quality U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Grundler, Christopher
Sent: Wed 9/9/2015 2:11:54 AM
Subject: Re: VW

Great. Thx

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 8, 2015, at 10:10 PM, Bunker, Byron <bunker.byron@epa.gov> wrote:

Yes on calendar and update for Janet at the end of the week.

Ex. 7

We will get the briefing together with some options.

Thanks,

Byron

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Cell Phone (734) 353-9623

Sent from my cell phone.

On Sep 8, 2015, at 9:25 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

Colleagues:

Ex. 7

Ex. 7

Also, Byron:

Ex. 7

Many thanks, Chris

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Bunker, Byron
Sent: Wed 9/9/2015 12:00:03 PM
Subject: Time to talk briefly this AM?

Hi Phil,

Ex. 7

Byron

****
Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623
****

-----Original Message-----
From: Bunker, Byron
Sent: Wednesday, September 09, 2015 7:55 AM
To: Stewart, Gwen
Cc: Hengst, Benjamin; Brooks, Phillip; Sutton, Tia; Jones, Jacqueline; Patterson, Susan; Cook, Leila; Wehrly, Linc
Subject: Meeting request for Janet McCabe and Cynthia Giles

Hi Gwen,

Ex. 7

Ideally, we would do this meeting next Tuesday September 15 as described in Chris's note copied below. I will be in DC that day which works well for me. I absolutely cannot do the meeting from 2-4 when I will be doing a CD all hands meeting. Otherwise, I assume I can rearrange my calendar to accommodate Janet, Cynthia and Chris's calendars.

Meeting Title: VW Diesel Update
When: 9/15/2015 or as soon after then as possible
Duration: 1 hr
Subject: Potential compliance issue with VW diesel vehicles

Invitees:
Janet McCabe
Cynthia Giles
Chris Grundler
Phil Brooks
Evan Belser
Whoever Phil Brooks wants to invite (OCEFT too?) Lee Cook Ben Hengst Byron Bunker Linc Wehrly Jim Snyder David Orlin John Millet Erin Birgfeld

Thanks,

Byron

****
Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623
****

-----Original Message-----
From: Grundler, Christopher
Sent: Tuesday, September 08, 2015 9:26 PM
To: Bunker, Byron; Brooks, Phillip
Cc: Hengst, Benjamin
Subject: VW

Ex. 7

Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Pickell, Casey[Pickell.Casey@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/9/2015 1:14:18 PM
Subject: RE: VW - Section 177 States

Thanks, Casey!

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Pickell, Casey
Sent: Wednesday, September 09, 2015 9:10 AM
To: Belser, Evan
Cc: Kaul, Meetu; Fried, Gregory
Subject: VW - Section 177 States

Electronic version of the list of Section 177 States attached. Please let me know if you need anything else.

Thanks,
Casey

-----Original Message-----
From: Belser, Evan
Sent: Tuesday, September 08, 2015 3:25 PM
To: Pickell, Casey
Cc: Kaul, Meetu; Orehowsky, Gregory
Subject: RE: I'm in 1119B

Please also email the electronic version of your write-up to me, Greg, and Meetu.

-----Original Message-----
From: Pickell, Casey
Sent: Tuesday, September 08, 2015 2:17 PM
To: Belser, Evan
Subject: RE: I'm in 1119B

No problem, I'll keep reading some background info on this stuff and continue with the penalty interest memos until tomorrow. Also FYI - got my badge.

Thanks,

Casey

-----Original Message-----
From: Belser, Evan
Sent: Tuesday, September 08, 2015 1:33 PM
To: Pickell, Casey
Subject: Re: I'm in 1119B

This is exactly what I needed. Thanks for the quick work.

Thanks,
Evan

> On Sep 8, 2015, at 1:24 PM, Belser, Evan <Belser.Evan@epa.gov> wrote:
>
> Feel free to drop that write up whenever.
>
> Thanks,
> Evan

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Wed 9/9/2015 1:33:38 PM
Subject: It's like Airbnb -- but for RVs
MAIL_CONVERSATION_TOPIC: It's like Airbnb -- but for RVs
Created: Fri 3/18/2016 6:18:25 PM

A new entrant to the peer-to-peer economy hopes to capitalize on the trend of consumers who want to rent recreational vehicles. Using the Airbnb model, Outdoorsy.co launched nationally last week and is among a handful of companies competing in the new industry. Outdoorsy has approximately 2,300 RVs listed on its website-everything from pop-up trailers and classic Volkswagen (XETRA: VOW3-DE) ...

View article...

To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Ex. 7
Cc: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Ex. 7
Sent: Wed 9/9/2015 2:40:17 PM
Subject: RE: VW Meeting tomorrow

Ex. 5

Ex. 7

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

Ex. 7

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

From: Ex. 7
Sent: Wednesday, September 09, 2015 9:49 AM
To: 'Kaul, Meetu' <Kaul.Meetu@epa.gov>; Ex. 7
Ex. 7
Cc: Orehowsky, Gregory <Orehowsky.Gregory@epa.gov>
Subject: RE: Meeting tomorrow

Sounds like a plan.

Ex. 5, 7

Ex. 7

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

Ex. 7

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

From: Kaul, Meetu [mailto:Kaul.Meetu@epa.gov]
Sent: Wednesday, September 09, 2015 9:43 AM
To: Ex. 7
Ex. 7
Cc: Orehowsky, Gregory <Orehowsky.Gregory@epa.gov>
Subject: RE: Meeting tomorrow

Come to the south lobby and give me a call. I'm trying to find a free conference room for us. Otherwise we can just meet in my or Greg's office.

Ex. 5, 7

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Ex. 7
Sent: Tuesday, September 08, 2015 5:21 PM
To: Ex. 7; Kaul, Meetu
Cc: Orehowsky, Gregory
Subject: RE: Meeting tomorrow

2pm works for me. Ex. 7 and I will walk down to EPA. Where should we meet you?

From: Ex. 7
Sent: Tuesday, September 08, 2015 4:42 PM
To: Kaul, Meetu <Kaul.Meetu@epa.gov>; Ex. 7
Ex. 7
Cc: Orehowsky, Gregory <Orehowsky.Gregory@epa.gov>
Subject: RE: Meeting tomorrow

2 is great for me.

Ex. 7

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

Ex. 7

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

From: Kaul, Meetu [mailto:Kaul.Meetu@epa.gov]
Sent: Tuesday, September 08, 2015 4:38 PM
To: Ex. 7 (ENRD)
Ex. 7
Cc: Orehowsky, Gregory <Orehowsky.Gregory@epa.gov>
Subject: Meeting tomorrow

Hi Ex. 7

Greg and I are pretty open tomorrow. I would prefer an afternoon meeting – how does 2:00 pm sound? Otherwise, we could do 11:30 as well.

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Wehrly, Linc
Sent: Wed 9/9/2015 3:00:03 PM
Subject: RE: VW Follow up

Sure. Did you want to schedule the meeting today for later this week or schedule it for today? My schedule is pretty full today, so tomorrow or Friday would be better. Im available anytime Friday or 10-11 or 1-3 tomorrow.

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Kaul, Meetu
Sent: Wednesday, September 09, 2015 10:46 AM
To: Wehrly, Linc
Subject: VW Follow up

Linc,

Byron indicated to Phill that someone would be reaching out to me to schedule a debrief of last Thursday's meeting. I just wanted to let you know that our office is scheduled for a hardware "refresh" on Thursday so we will be without computers for much of Thursday and Friday.

We can still schedule a videoconference/audio conference, but as I don't have a blackberry, reaching me by phone after today is best in case I can't access emails via my personal computer.

If there is any way we can get this meeting scheduled today so I can forward on to relevant folks/deal with logistics on my end while I still have a computer, that would be fantastic. (And if holding the debrief tomorrow is possible, that would be even better).

Thanks,

mk

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/9/2015 3:14:40 PM
Subject: RE: VW Follow up

Linc,

I meant just to get it on the calendar today but that the meeting could be tomorrow/Friday.

Tomorrow from 1:30-2:30 sounds good.

Would you mind setting up the calendar invite just because if anything changes I won't have access to my computer. And if you have a call-in number we could use that would be great.

Thanks very much.

-mk

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Wehrly, Linc

Sent: Wednesday, September 09, 2015 11:00 AM
To: Kaul, Meetu
Subject: RE: VW Follow up

Sure. Did you want to schedule the meeting today for later this week or schedule it for today? My schedule is pretty full today, so tomorrow or Friday would be better. Im available anytime Friday or 10-11 or 1-3 tomorrow.

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Kaul, Meetu
Sent: Wednesday, September 09, 2015 10:46 AM
To: Wehrly, Linc
Subject: VW Follow up

Linc,

Byron indicated to Phill that someone would be reaching out to me to schedule a debrief of last Thursday's meeting. I just wanted to let you know that our office is scheduled for a hardware "refresh" on Thursday so we will be without computers for much of Thursday and Friday.

We can still schedule a videoconference/audio conference, but as I don't have a blackberry,

reaching me by phone after today is best in case I can't access emails via my personal computer.

If there is any way we can get this meeting scheduled today so I can forward on to relevant folks/deal with logistics on my end while I still have a computer, that would be fantastic. (And if holding the debrief tomorrow is possible, that would be even better).

Thanks,

mk

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kaul, Meetu
Required Attendees: Poux, Joseph (ENRD); Parker, Doug; Benjamin.fisherow@usdoj.gov; Allen, Leslie (ENRD); Engel, Bethany (ENRD); Van Eaton, Josh (ENRD); Orehowsky, Gregory; Belser, Evan; Werner, Jacqueline; karen.dworkin@usdoj.gov; Brooks, Phillip; Wehrly, Linc; Shinkman, Susan; Kelley, Rosemarie
Optional Attendees: Stanich, Ted; Goodwin, Ed; Fisher, Mike; Gregory, John; Youngberg, Jennifer
Location: 1-866-299-3188 Passcode Non-Responsive
Importance: Normal
Subject: VW - OTAQ Debrief Confirmed
Start Date/Time: Thur 9/10/2015 5:30:00 PM
End Date/Time: Thur 9/10/2015 6:30:00 PM

To: Charmley, William[charmley.william@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Moran, Robin[moran.robin@epa.gov]
Cc: Ex. 7 Ex. 7
wendy@betterworldgroup.com[wendy@betterworldgroup.com]
From: Ex. 7
Sent: Wed 9/9/2015 4:04:46 PM
Subject: MTE technical discussions, Part 2

Dear OTAQ colleagues,

I'd like to introduce you to Wendy James (see contact info below). Our friends at the Energy Foundation have recruited Wendy and BWG to organize another discussion similar to one we had at ICCT in SF a year or so ago. I found that discussion as well as the on-going dialogue with our NGO colleagues very useful for our efforts so I am supportive of Wendy's idea for a face-to-face meeting before the end of the year. She'll be following up soon with more details, so my intent here is simply to put this on your radar and to introduce you to our good friend Wendy. Returning participants from CARB will hopefully be Ex. 7, and myself. Thanks.

Best,

Ex. 7

****

Wendy James, CEO

The Better World Group

Burbank | Silicon Valley | Sacramento

1612 W. Olive Ave., Suite 302 | Burbank, CA 91506

wendy@betterworldgroup.com
Tel: 818.563.9111 | Fax: 818.563.4943 | Mobile: 818.424.9390

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From: Kaul, Meetu
Required Attendees: Poux, Joseph (ENRD); Parker, Doug; Benjamin.fisherow@usdoj.gov; Allen, Leslie (ENRD); Engel, Bethany (ENRD); Van Eaton, Josh (ENRD); Orehowsky, Gregory; Belser, Evan; Werner, Jacqueline; karen.dworkin@usdoj.gov; Brooks, Phillip; Wehrly, Linc
Location: Conference line TBD
Importance: Normal
Subject: VW - Hold for OTAQ Debrief
Start Date/Time: Thur 9/10/2015 5:30:00 PM
End Date/Time: Thur 9/10/2015 6:30:00 PM

Pending final confirmation from OTAQ, we are tentatively scheduling the OTAQ VW debrief for 1:30 pm on Thursday 9/10. Will follow up with a confirmation and conference call details.

From: Kaul, Meetu
Required Attendees: Poux, Joseph (ENRD); Parker, Doug; Benjamin.fisherow@usdoj.gov; Allen, Leslie (ENRD); Engel, Bethany (ENRD); Van Eaton, Josh (ENRD); Orehowsky, Gregory; Belser, Evan; Werner, Jacqueline; karen.dworkin@usdoj.gov; Brooks, Phillip; Wehrly, Linc; Shinkman, Susan; Kelley, Rosemarie
Optional Attendees: Stanich, Ted; Goodwin, Ed; Fisher, Mike; Gregory, John; Youngberg, Jennifer
Location: 1-866-299-3188 Passcode Non-Responsive
Importance: Normal
Subject: VW - OTAQ Debrief Confirmed
Start Date/Time: Thur 9/10/2015 5:30:00 PM
End Date/Time: Thur 9/10/2015 6:30:00 PM

From: Belser, Evan
Location: Conference line TBD
Importance: Normal
Subject: Accepted: VW - Hold for OTAQ Debrief
Start Date/Time: Thur 9/10/2015 5:30:00 PM
End Date/Time: Thur 9/10/2015 6:30:00 PM

From: Wehrly, Linc
Location: Conference line TBD
Importance: Normal
Subject: Accepted: VW - Hold for OTAQ Debrief
Start Date/Time: Thur 9/10/2015 5:30:00 PM
End Date/Time: Thur 9/10/2015 6:30:00 PM

From: Wehrly, Linc
Location: Conference line TBD
Importance: Normal
Subject: Accepted: VW - Hold for OTAQ Debrief
Start Date/Time: Thur 9/10/2015 5:30:00 PM
End Date/Time: Thur 9/10/2015 6:30:00 PM

To: Chapman, Apple[Chapman.Apple@epa.gov]
Cc: Fried, Gregory[Fried.Gregory@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Kodish, Jeff[Kodish.Jeff@epa.gov]
From: Werner, Jacqueline
Sent: Wed 9/9/2015 6:57:35 PM
Subject: RE: RE:

I think so.

Thx, jj

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

From: Chapman, Apple
Sent: Wednesday, September 09, 2015 2:27 PM
To: Werner, Jacqueline
Cc: Fried, Gregory; Thompson, Christopher; Belser, Evan; Brooks, Phillip; Kaul, Meetu; Kodish, Jeff
Subject: Re: RE:

Non-Responsive

Apple Chapman

OECA

Air Enforcement Division

Sent from my iPhone

202-841-6076

On Sep 9, 2015, at 2:21 PM, Werner, Jacqueline <Werner.Jacqueline@epa.gov> wrote:

Non-Responsive

Thanks, jj

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

From: Chapman, Apple

Sent: Wednesday, September 09, 2015 1:07 PM
To: Werner, Jacqueline
Cc: Fried, Gregory; Thompson, Christopher; Belser, Evan; Brooks, Phillip; Kaul, Meetu; Kodish, Jeff
Subject: Re:

Non-Responsive

Also, I have to leave at 4:30 so can we get to it before then?

Thanks!

Apple Chapman

OECA

Air Enforcement Division

Sent from my iPhone

202-841-6076

On Sep 9, 2015, at 1:03 PM, Werner, Jacqueline <Werner.Jacqueline@epa.gov> wrote:

> Below please see the draft Agenda for today's General with Susan/Rosemarie. Please let me know asap if you have any additions/corrections.
>
> Thanks,
>
> jj
>
> **AED General with Susan/Rosemarie**

September 9, 2015

General:

•□□□□□□□□ Air Rulemakings

SSEB:

•□□□□□□□□ PM 2.5 NAAQS Rule

MSEB:

•□□□□□□□□ AMCC

•□□□□□□□□ H&S

•□□□□□□□□ VW

For Cynthia:

- □□□□□□□□ AMCC

Personnel:

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Ex. 7
Ex. 7 @vw.com]
From: Ex. 7
Sent: Wed 9/9/2015 7:26:58 PM
Subject: RE: 2015MY (the Gen3) 2.0 diesel durability

Hello Jim:

Regarding your questions, the following response is provided by the emission certification group at Volkswagen AG.

Ex. 4 - CBI

If you have any further questions, please let us know.

Best regards,

Ex. 7

Ex. 7

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: Ex. 7

Fax: (248) 754-4207

E-Mail: Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, September 03, 2015 7:39 PM
To: Ex. 7 @vw.com>
Cc: Ex. 7 @vw.com>
Subject: 2015MY (the Gen3) 2.0 diesel durability

Ex. 7

I will be of Friday and of course Monday But rather than wait til Tuesday I want to ask for

Ex. 4 - CBI

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946

snyder.jim@epa.gov

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7 (EEO)
Sent: Wed 9/9/2015 8:04:24 PM
Subject: Gen 1

Hello Byron,

Still working on a Gen 1 discussion. If you want to talk more at the end of the day call my cell.
Ex. 6

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/9/2015 9:05:22 PM
Subject: RE: VW - Hold for OTAQ Debrief

Thanks, Linc.

Do you have a call-in number we can all use? I don't have one that will work for more than 6 lines and Phill's may be in use.

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Appointment-----
From: Wehrly, Linc
Sent: Wednesday, September 09, 2015 2:57 PM
To: Kaul, Meetu
Subject: Accepted: VW - Hold for OTAQ Debrief
When: Thursday, September 10, 2015 1:30 PM-2:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Conference line TBD

From: Kaul, Meetu
Required Attendees: Poux, Joseph (ENRD); Parker, Doug; Benjamin.fisherow@usdoj.gov; Allen, Leslie (ENRD); Engel, Bethany (ENRD); Van Eaton, Josh (ENRD); Orehowsky, Gregory; Belser, Evan; Werner, Jacqueline; karen.dworkin@usdoj.gov; Brooks, Phillip; Wehrly, Linc; Shinkman, Susan; Kelley, Rosemarie
Optional Attendees: Stanich, Ted; Goodwin, Ed; Fisher, Mike; Gregory, John; Youngberg, Jennifer
Location: **Non-Responsive**
Importance: Normal
Subject: VW - OTAQ Debrief Confirmed
Start Date/Time: Thur 9/10/2015 5:30:00 PM
End Date/Time: Thur 9/10/2015 6:30:00 PM

From: Kaul, Meetu
Required Attendees: Poux, Joseph (ENRD); Parker, Doug; Benjamin.fisherow@usdoj.gov; Allen, Leslie (ENRD); Engel, Bethany (ENRD); Van Eaton, Josh (ENRD); Orehowsky, Gregory; Belser, Evan; Werner, Jacqueline; karen.dworkin@usdoj.gov; Brooks, Phillip; Wehrly, Linc; Shinkman, Susan; Kelley, Rosemarie
Optional Attendees: Stanich, Ted; Goodwin, Ed; Fisher, Mike; Gregory, John; Youngberg, Jennifer
Location: 1-866-299-3188 Passcode Non-Responsive
Importance: Normal
Subject: VW - OTAQ Debrief Confirmed
Start Date/Time: Thur 9/10/2015 5:30:00 PM
End Date/Time: Thur 9/10/2015 6:30:00 PM

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Bunker, Byron
Sent: Wed 9/9/2015 11:56:47 PM
Subject: Fwd: Friday with OECA

Hi Phil,

Do you know what this is about? Is it VW? We weren't planning to brief Janet until next Tuesday.

Thanks,

Byron

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Cell Phone (734) 353-9623

Sent from my cell phone.

Begin forwarded message:

From: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>
Date: September 9, 2015 at 7:52:35 PM EDT
To: "Bunker, Byron" <bunker.byron@epa.gov>
Cc: "Grundler, Christopher" <grundler.christopher@epa.gov>
Subject: Friday with OECA

Byron, just wanted to make sure you saw that Cynthia scheduled an 8 am meeting with Janet this Friday. No topic indicated but assuming VW. Phil is on invite if you want to check in with him on it. Chris and I are on too.

To: Ex. 7
Cc: Charmley, William[charmley.william@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Moran, Robin[moran.robin@epa.gov]; Ex. 7
Ex. 7
wendy@betterworldgroup.com[wendy@betterworldgroup.com]
From: Grundler, Christopher
Sent: Thur 9/10/2015 12:39:04 AM
Subject: Re: MTE technical discussions, Part 2

Great idea! Count me in

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 9, 2015, at 12:04 PM, Ex. 7 wrote:

> Dear OTAQ colleagues,
>
> I'd like to introduce you to Wendy James (see contact info below). Our friends at the Energy Foundation have recruited Wendy and BWG to organize another discussion similar to one we had at ICCT in SF a year or so ago. I found that discussion as well as the on-going dialogue with our NGO colleagues very useful for our efforts so I am supportive of Wendy's idea for a face-to-face meeting before the end of the year. She'll be following up soon with more details, so my intent here is simply to put this on your radar and to introduce you to our good friend Wendy. Returning participants from CARB will hopefully be Ex. 7 and myself. Thanks.
>
> Best,
>
> **Ex. 7**
>
> **********
>
> Wendy James, CEO
>
> The Better World Group

Burbank | Silicon Valley | Sacramento

1612 W. Olive Ave., Suite 302 | Burbank, CA 91506

wendy@betterworldgroup.com
Tel: 818.563.9111 | Fax: 818.563.4943 | Mobile: 818.424.9390

"Like" Better World Group on Facebook.

"Follow" Better World Group on Twitter.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: drew@theicct.org
Sent: Thur 9/10/2015 12:56:01 AM
Subject: Re: Re: ICCT Briefing on Aviation research

<4314298E-1569-4EAF-8B07-5CD8B943834A@epa.gov>,<1702DD9F-93BC-47ED-A406-167E64FE4E59@theicct.org>
<B5B2205B-BDA1-4491-BF88-431E60EEBA2B@epa.gov>
Auto-Submitted: auto-replied (vacation)
Precedence: bulk
MIME-Version: 1.0
Content-Type: text/plain; charset=utf-8
Content-Transfer-Encoding: 8bit

Thanks for your message. I'm at an All Staff Retreat this week, and may be slow to respond. Apologies in advance.

To: Shinkman, Susan (Shinkman.Susan@epa.gov)[Shinkman.Susan@epa.gov]; Kelly, Larnet[Kelly.Larnet@epa.gov]
Cc: Chapman, Apple[Chapman.Apple@epa.gov]
From: Brooks, Phillip
Sent: Thur 9/10/2015 11:41:12 AM
Subject: Personnel who may be essential in the event of a shut down

Non-Responsive

VW

Non-Responsive

Non-Responsive

To: Ex. 7 @vw.com]
From: Bunker, Byron
Sent: Thur 9/10/2015 1:17:13 PM
Subject: Can you give me a call when you have a minute?

Hi Ex. 7

When you have a minute, can you give me a call?

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

To: Poux, Joseph (ENRD)[Joseph.Poux@usdoj.gov]
From: Kaul, Meetu
Sent: Thur 9/10/2015 2:10:30 PM
Subject: RE: VW - OTAQ Debrief Confirmed

I saw she received the invite. Please disregard below.
Thanks

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Kaul, Meetu
Sent: Thursday, September 10, 2015 10:10 AM
To: 'Poux, Joseph (ENRD)'
Subject: RE: VW - OTAQ Debrief Confirmed

Certainly. Could you send me an email?

Also, FYI, my computer may be taken away this morning for a "hardware refresh" so I may not have access to email shortly (in which case, please forward the invite as needed).

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Poux, Joseph (ENRD) [mailto:Joseph.Poux@usdoj.gov]
Sent: Wednesday, September 09, 2015 5:54 PM
To: Kaul, Meetu
Subject: Re: VW - OTAQ Debrief Confirmed

Meetu,

Could we add Jen Blackwell, who is working with me on this case here at ECS to the invite list?

- Joe

Sent from my iPhone

> On Sep 9, 2015, at 5:12 PM, Kaul, Meetu <Kaul.Meetu@epa.gov> wrote:
>
>
>
> <meeting.ics>

CAFEE

Center for Alternative Fuels, Engines & Emissions

West Virginia University

Final Report

In-Use Emissions Testing of Light-Duty Diesel Vehicles in the United States

Prepared by:

Principal Investigator

Dr. Gregory J. Thompson (Principal Investigator)

Phone: (304) 293-3254

Email: gregory.thompson@mail.wvu.edu

Co-Principal Investigators

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Prepared for:

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Researcher - Passenger Vehicle Program

International Council on Clean Transportation (ICCT)

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Washington, DC 20005

Phone: (202) 534-1605

Email: francisco@theicct.org

April 14, 2014

VW FOIA, EPA 06/20/2017 2017-FFP_022932

EXECUTIVE SUMMARY

The Center for Alternative Fuels, Engines and Emissions (CAFEE) at West Virginia University (WVU) was contracted by the International Council on Clean Transportation (ICCT) to conduct in-use testing of three light-duty diesel vehicles of European make, using a portable emissions measurement system (PEMS), over a variety of pre-defined test routes exhibiting diverse driving conditions pertinent to major United States population centers located in the state of California. Additionally, one vehicle was operated over an extended distance of nearly 4000km predominantly composed of highway driving conditions between California and Washington State. Also, two out of the three test vehicles were selected for chassis dynamometer testing at California Air Resources Board's (CARB) El Monte, CA vehicle certification test facility; however, a detailed discussion of these results is not part of this report.

The test vehicles were certified to US-EPA Tier2-Bin5 and California LEV-II ULEV emissions limits and were equipped with NO_x after-treatment technologies, including one lean-NO_x trap (LNT) (*Vehicle A*) and two urea-based selective catalytic reduction (SCR) systems (*Vehicles B* and *C*). Furthermore, all three test vehicles were thoroughly checked for possible engine or after-treatment malfunction codes using an ECU scanning tool prior to selecting a vehicle for this on-road measurement campaign, with none of them showing any fault code or other anomalies. The after-treatment system was assumed to be '*de-greened*' as all three vehicles have accumulated more than 3,000 to 4,000 miles, and no reduction in catalytic activity due to aging was expected as the total mileage was relatively low (< 15,000 miles) for all test vehicles. Gaseous emissions of NO_x, CO, THC and CO_2 were measured using the OBS-2200 PEMS from Horiba Ltd., while particulate number and mass concentrations were inferred from real-time particle charge measurements employing a Pegasor particle sensor, model PPS-M, from Pegasor.

Real-world NO_x emissions were found to exceed the US-EPA Tier2-Bin5 (at full useful life) standard by a factor of 15 to 35 for the LNT equipped vehicle, by a factor of 5 to 20 for one and at or below the standard for the second urea-SCR fitted vehicle over five pre-defined routes categorized based on their predominant driving conditions, namely, i) highway, ii) urban/suburban, and iii) rural-up/downhill driving. The second urea-SCR equipped vehicle exceeded the standard only during rural-up/downhill operating conditions by a factor of ~10. Most importantly, distance-specific NO_x emissions for the two high-emitting vehicles were

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below the US-EPA Tier2-Bin5 standard for the weighted average over the FTP-75 certification cycle during chassis dynamometer testing at CARB's El Monte facility, with 0.022g/km ±0.006g/km (±1σ, 2 repeats) and 0.016g/km ±0.002g/km (±1σ, 3 repeats) for the LNT and urea-SCR equipped vehicles, respectively. It has to be noted that on-road emissions testing was performed with the engine and after-treatment in warmed-up condition (i.e. warm/hot start). Increased NO_x emissions are usually expected for cold-start as seen during the first portion (i.e. '*Bag-1*') of the FTP-75 cycle, however, not for hot, running conditions as exhibited during '*Bag-2 and 3*' of the FTP-75 cycle or on-road operation of the vehicle.

Generally, NO_x emissions were observed to be highest for rural-up/downhill and lowest for high-speed highway driving conditions with relatively flat terrain. The LNT after-treatment based vehicle was observed to emit significantly (> 19% to 90%) more NO_x during diesel particulate filter (DPF) regeneration events. This was speculated to be due to an extended duration of lean exhaust conditions and a lack of frequent enrichment of the exhaust gas ($\lambda < 1$) while DPF regeneration was ongoing, leading to an inhibition of necessary LNT regeneration (D_eNOx), and thus, causing the NO_x storage catalyst to become saturated with NO_x emissions that ultimately started to break through. *Vehicles B* and *C* were not observed to exhibit such a predominant increase in NO_x emissions during DPF regeneration events and changes in NO_x emissions rates were generally confounded by driver and traffic pattern influences.

Even though exceeding the US-EPA Tier2-Bin5 standard on average by a factor of 6 (i.e. 0.26g/km ±0.21g/km (±1σ)) during extended highway driving between California and Washington State, *Vehicle B*, the urea-SCR equipped vehicle, was found to have NO_x emissions below the regulatory standard for portions of the route characterized by low or negligible changes in altitude (i.e. near zero road grade), and with the vehicle operated in cruise-control mode at highway speeds (i.e. 120km/h).

In general, CO and THC emissions were observed to be well below the regulatory level for all three test vehicles and driving conditions, with exception of two routes for the LNT-equipped vehicle where THC emissions were observed at slightly elevated levels. Interestingly, chassis dynamometer testing of *Vehicles A* and *B* indicated THC emissions to be primarily composed of methane (CH_4/THC ratio > 0.95) which is surprising for diesel fueled vehicle and might be attributed to secondary reactions occurring over the surface of the oxidation catalyst or the LNT

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in case of *Vehicle A*.

As expected, highway driving showed lowest distance-specific CO_2, whereas urban/suburban driving conditions lead to highest CO_2 emissions factors for all vehicles.

During PEMS testing, average fuel economy for highway driving with *Vehicles A* and *B* was 45.3 mpg ±8.6mpg (±σ1) and 43.7mpg ±5.7mpg (±σ1), respectively, and 27.3 mpg (no repetition) for *Vehicle C* which is ~39% lower compared to *Vehicles A* and *B*. On the other hand, urban/suburban driving results in average fuel economies of 30.0mpg ±2.9mpg (±σ1) and 26.6 mpg ±1.4mpg (±σ1) for *Vehicles A* and *B*, respectively, and 18.5mpg ±4.0mpg (±σ1) for *Vehicle C* which is 35% lower compared to *Vehicles A* and *B*. Overall, urban/suburban driving leads to a 32-39% reduction in fuel economy over highway driving.

Particulate number emissions, inferred from PPS measurements, were observed below the Euro 5b/b+ standard except during vehicle operation exhibiting DPF regeneration events where PN emissions significantly increased by two to three orders of magnitude, thereby exceeding the Euro 5b/b+ standard under all driving conditions for the LNT and first urea-SCR vehicles. It is noted that PN is not regulated in the United States. Also, for the latter vehicle DPF regeneration frequencies were found to be predominantly based on distance traveled, occurring after every 756km ±29km (±1σ), corresponding to ~7.07hours ±0.06hours for highway driving conditions.

It is noted that only three vehicles were tested as part of this measurement campaign with each vehicle being a different after-treatment technology or vehicle manufacturer; conclusions drawn from the data presented herein are confined to these three vehicles. The limited data set does not necessarily permit drawing more generalized conclusions for a specific vehicle category or after-treatment technology.

VW FOIA, EPA 06/20/2017 2017-FFP_022935

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VW FOIA, EPA 06/20/2017 2017-FFP_022937

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LIST OF ABBREVIATIONS AND UNITS

CAFEE	-	Center for Alternative Fuels, Engines and Emissions
CARB	-	California Air Resources Board
CLD	-	Chemiluminiscence Detector
CO	-	Carbon Monoxide
CO_2	-	Carbon Dioxide
CVS	-	Constant Volume Sampler
DPF	-	Diesel Particle Filter
EERL	-	Engines and Emissions Research Laboratory
EFM	-	Exhaust Flow Meter
EPA	-	Environmental Protection Agency
EU	-	European Union
FTP	-	Federal Test Procedure
GPS	-	Global Positioning System
FID	-	Flame Ionization Detector
LNT	-	Lean NO_x Trap
MPG	-	Miles per Gallon
NDIR	-	Non-Dispersive Infrared Spectrometer
NEDC	-	New European Driving Cycle
NO	-	Nitrogen Monoxide
NO_x	-	Oxides of Nitrogen
NTE	-	Not-to-Exceed
OC	-	Oxidation Catalyst
PEMS	-	Portable Emissions Measurement System
PM	-	Particulate Matter
PN	-	Particle Number
RPA	-	Relative Positive Acceleration
SCR	-	Selective Catalytic Reduction
THC	-	Total Hydrocarbons

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1 INTRODUCTION

Researchers at the Joint Research Centre (JRC) in Europe have identified off-cycle oxides of nitrogen (NO_x) emissions from light-duty diesel vehicles (LDV) to substantially exceed the Euro 3-5 emissions standards on average by a factor of 4 to 7 over specific test routes [1]. Hence, the study concluded that the introduction of tighter emissions limits for the purpose of vehicle/engine certification has not necessarily translated into effective on-road NO_x reductions of the same magnitude [1]. Furthermore, work conducted by other researchers has highlighted the thermodynamic conditions of the exhaust gas and after-treatment components to be a primary limiting factor for achieving high NO_x conversion efficiencies using the aqueous-urea based selective catalytic reduction (SCR) system, especially during low-load, low-speed operation such as frequently encountered during urban driving and stop-and-go traffic on congested highways.

Sparked by these findings, the International Council on Clean Transportation (ICCT) contracted West Virginia University (WVU) to perform on-road emissions measurements in order to study off-cycle emissions performance and fuel economy from three diesel light-duty vehicles (LDVs) of European make under typical United States (US) driving conditions using a portable emissions measurement system (PEMS). The PEMS testing aided in comparing the performance of different NO_x control technologies under off-cycle conditions against United States Environmental Protection Agency (US-EPA) Tier2-Bin5 and California Air Resources Board (CARB) LEV-II ULEV emissions standards.

The test plan covered a wide variety of topological, road and ambient conditions as well as traffic densities over three major urban areas along the West coast, namely, San Diego, Los Angeles and San Francisco (California). Additionally, one vehicle, specifically one equipped with urea-SCR after-treatment technology, was operated over a total distance of ~4000km between Los Angeles, CA and Seattle, WA to investigate emissions reduction characteristics over extended highway driving conditions. Furthermore, two out of the three test vehicles were selected for chassis dynamometer testing over standardized test cycles at CARB's vehicle certification laboratory in El Monte, CA. This also allowed for comparison of the PEMS against laboratory grade instruments to verify measurement accuracy of the on-board system.

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1.1 Objectives

The primary objective of this study was to gain insight into the real-world emissions of NOx and other regulated gaseous pollutants from diesel LDVs certified to US-EPA Tier 2-Bin 5 and CARB LEV-II ULEV (CA) standards. Emissions were measured during typical driving conditions pertinent to major US population centers using on-board instrumentation (PEMS). For a subset of vehicles and test routes, particulate matter mass emissions (PM) and particle number (PN) emission concentrations were also measured on-board.

The primary objective of this study was to gain insight into real-world regulated gaseous pollutant emissions from diesel LDVs that are certified to US-EPA Tier 2-Bin 5 and CARB LEV-II ULEV (CA) emissions standards. Emissions were measured during typical driving conditions pertinent to major US population centers, with specific interest in quantifying NO_x emissions. Additionally, particulate matter mass emissions (PM) and particle number (PN) emission concentrations were measured for a subset of vehicles and test routes.

To that aim, the Center for Alternative Fuels, Engines and Emissions (CAFEE) at WVU conducted light-duty PEMS testing on two 2012 model year (MY) vehicles and one MY 2013, and equipped with two different NO_x after-treatment technologies, including lean NO_x trap (LNT) and aqueous urea-based selective catalytic reduction (SCR) system. Gaseous exhaust emissions, including NO_x, carbon monoxide (CO), carbon dioxide (CO_2) and total hydrocarbons (THC) were measured on a continuous basis utilizing a Horiba OBS-2200 portable emissions measurement system, whereas particle number concentrations and particulate mass emissions were inferred from real-time measurements performed using a Pegasor particle sensor, model PPS-M from Pegasor.

Specifically, the data collected during the course of this study allowed for following analysis and comparisons:

i. comparison of off-cycle NO_x emissions against US-EPA Tier 2-Bin 5 and CARB LEV-II ULEV emissions standards;

ii. evaluation of fuel economy in comparison to standardized chassis dynamometer test cycles and EPA evaluated fuel economy ratings as published on window stickers for new cars sold in the United States [2];

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iii. calculation of in-use emissions factors based on the '*Averaging Windows Method*' (AWM) [3] using CO_2 emissions emitted over a certification cycle as the threshold value to define the averaging window size;

iv. evaluation of NO_x after-treatment conversion efficiencies of two different technologies as a function of driving conditions, traffic density, ambient conditions and exhaust gas thermodynamic properties;

v. quantification of particle number (PN) emissions concentrations with regard to the particle number limits (i.e. $6.0x10^{11}$ #/km) set forth by the European Union (EU) in 2013 with the introduction of Euro 5b/b+ emission standards [4];

vi. evaluation of diesel particulate filter (DPF) filtration efficiency and frequency of regeneration events; and

vii. quantification of maximum route emissions rates and their respective location along the routes.

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2 BACKGROUND

The background information given hereafter will be limited to a discussion of United States Environmental Protection Agency's (US-EPA) Tier 2 and California Air Resources Board's (CARB) LEV-II emissions regulations that are applicable to the two light-duty vehicles (LDV) and one light-duty truck (LDT) whose on-road emissions have been evaluated as part of this study.

The ongoing effort by EPA and CARB to comply with National Ambient Air Quality Standards (NAAQS), particularly in several non-attainment regions, has led to ever-increasingly stringent regulations on LDVs emissions. These are currently regulated under EPA's Tier 2 and California LEV-II emissions regulations. EPA's vehicle classification is based on gross vehicle weight rating (GVWR) and is shown in Table 2.1. It has to be noted that medium duty passenger vehicles (MDPV) are regulated under light-duty vehicle emissions regulations.

Table 2.1: Vehicle classification based on gross vehicle weight rating (GVWR) [5]

<table>
<tr><th colspan="11">Gross Vehicle Weight Rating (GVWR) [lbs]</th></tr>
<tr><th></th><th colspan="2">6,000</th><th>8,500</th><th>10,500</th><th>14,000</th><th>16,000</th><th>19,500</th><th>26,000</th><th>33,000</th><th>60,000</th></tr>
<tr><td rowspan="4">Federal</td><td colspan="2">LDV</td><td>MDPV[c)]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">LDT</td><td colspan="8">HDV / HDE</td></tr>
<tr><td>LLDT</td><td>HLDT</td><td colspan="4">LHDDE</td><td colspan="2">MHDDE</td><td colspan="2">HHDDE / Urban Bus</td></tr>
<tr><td>LDT 1 & 2[a)]</td><td>LDT 3 & 4[b)]</td><td>HDV2b</td><td>HDV3</td><td>HDV4</td><td>HDV5</td><td>HDV6</td><td>HDV7</td><td>HDV8a</td><td>HDV8b</td></tr>
</table>

[a)] *Light-duty truck (LDT) 1 if loaded vehicle weight (LVW) = 3,750; LDT 2 if LVW > 3,750*

[b)] *LDT 3 if adjusted loaded vehicle weight (ALVW) = 5,750; LDT 4 if ALVW > 5,750*

[c)] *MDPV vehicles will generally be grouped with and treated as HLDTs in the Tier 2 program*

The EPA's Tier 2 emission standards that were phased in over a period of four years, beginning in 2004, for LDV/LLDTs, with an extension of two years for HLDTs, were in full effect starting from MY 2009 for all new passenger cars and light-duty trucks, including pickup trucks, vans, minivans and sport-utility vehicles. The Tier 2 standards were designed to significantly reduce ozone-forming pollution and PM emissions from passenger vehicles regardless of the fuel used and the type of vehicle, namely car, light-duty truck or larger passenger vehicle. The Tier 2 standards were implemented along with the gasoline fuel sulfur

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standards in order to enable emissions reduction technologies necessary to meet the stringent vehicle emissions standards. The gasoline fuel sulfur standard mandates the refiners and importers to meet a corporate average gasoline sulfur standard of 30 ppm starting from 2006 [6].

The EPA Tier 2 emissions standard requires each LDV/LDT vehicle manufacturer to meet a corporate average NO_x standard of 0.07g/mile (0.04 g/km) for the fleet of vehicles being sold for a given model year. Furthermore, the Tier 2 emissions standard consists of eight sub-bins, each one with a set of standards to which the manufacturer can certify their vehicles provided the corporate sales weighted average NO_x level over the full useful life of the vehicle (10 years/120,000 miles/193,121 km), for a given MY of Tier 2 vehicles, is less than 0.07g/mile (0.04 g/km). The corporate average emission standards are designed to meet the air quality goals allowing manufacturers the flexibility to certify some models above or below the standard, thereby enabling the use of available emissions reduction technologies in a cost-effective manner as opposed to meeting a single set of standards for all vehicles [6]. Final phased-in full and intermediate useful life Tier 2 standards are listed in Table 2.2.

Table 2.2: Light-duty vehicle, light-duty truck, and medium-duty passenger vehicle - EPA Tier 2 exhaust emissions standards in [g/miles] [6]

Bin#	Intermediate life (5 years / 50,000 mi)					Full useful life (10 years/120,000 mi)				
	NMOG*	CO	NO_x	PM	HCHO	NMOG*	CO	NO_x†	PM	HCHO
Temporary Bins										
11 MDPV[c]						0.28	7.3	0.90	0.12	0.032
10[a,b,d,f]	0.125 (0.160)	3.4 (4.4)	0.40	-	0.015 (0.018)	0.156 (0.230)	4.2 (6.4)	0.60	0.08	0.018 (0.027)
9[a,b,e,f]	0.075 (0.140)	3.4	0.20	-	0.015	0.090 (0.180)	4.2	0.30	0.06	0.018
Permanent Bins										
8[b]	0.100 (0.125)	3.4	0.14	-	0.015	0.125 (0.156)	4.2	0.20	0.02	0.018
7	0.075	3.4	0.11	-	0.015	0.09	4.2	0.15	0.02	0.018
6	0.075	3.4	0.08	-	0.015	0.09	4.2	0.10	0.01	0.018
5	0.075	3.4	0.05	-	0.015	0.09	4.2	0.07	0.01	0.018
4	-	-	-	-	-	0.07	2.1	0.04	0.01	0.011
3	-	-	-	-	-	0.055	2.1	0.03	0.01	0.011
2	-	-	-	-	-	0.01	2.1	0.02	0.01	0.004
1	-	-	-	-	-	0	0	0	0	0

* *for diesel fueled vehicle, NMOG (non-methane organic gases) means NMHC (non-methane hydrocarbons)*

† *average manufacturer fleet NO_x standard is 0.07 g/mi for Tier 2 vehicles*

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a *Bin deleted at end of 2006 model year (2008 for HLDTs)*
b *The higher temporary NMOG, CO and HCHO values apply only to HLDTs and MDPVs and expire after 2008*
c *An additional temporary bin restricted to MDPVs, expires after model year 2008*
d *Optional temporary NMOG standard of 0.195 g/mi (50,000) and 0.280 g/mi (full useful life) applies for qualifying LDT4s and MDPVs only*
e *Optional temporary NMOG standard of 0.100 g/mi (50,000) and 0.130 g/mi (full useful life) applies for qualifying LDT2s only*
f *50,000 mile standard optional for diesels certified to bins 9 or 10*

All Tier 2 exhaust emissions standards must be met over the FTP-75 chassis dynamometer test cycle. In addition to the above listed emissions standards, Tier 2 vehicles must also satisfy the supplemental FTP (SFTP) standards. The SFTP standards are intended to control emissions from vehicles when operated at high speed and acceleration rates (aggressive driving, as simulated through the US06 test cycle), as well as when operated under high ambient temperature conditions with vehicle air-conditioning system turned on (simulated through the SC03 test cycle). The SFTP emissions results are determined using the relationship outlined in Equation (1) where individual emissions measured over FTP, US06 and SC03 test cycles are added together with different weighting factors.

Eq. 1

Manufacturers must comply with 4000 mile and full useful life SFTP standards. The 4000 mile SFTP standards are shown in Table 2.3.

Table 2.3: US-EPA 4000 mile SFTP standards in [g/mi] for Tier 2 vehicles [6]

Vehicle Class [1)]	US06		SC03	
	$NMHC + NO_x$	CO	$NMHC + NO_x$	CO
LDV/LDT1	0.14	8.0	0.20	2.7
LDT2	0.25	10.5	0.27	3.5
LDT3	0.40	10.5	0.31	3.5
LDT4	0.60	11.8	0.44	4.0

[1)] *Supplemental exhaust emission standards are applicable to gasoline and diesel-fueled LDV/Ts but are not applicable to MDPVs, alternative fueled LDV/Ts, or flexible fueled LDV/Ts when operated on a fuel other than gasoline or diesel*

The full useful life SFTP standards are determined following Equation 2, which is based on Tier 1 SFTP standards, lowered by 35% of the difference between the Tier 2 and Tier 1 exhaust emissions standards. Tier 1 full useful life SFTP standards for different vehicle classes along

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with CO standards for individual chassis dynamometer test cycles as well as Tier 1 full useful life FTP standards are shown in Table 2.4 and Table 2.5, respectively.

Eq. 2

Table 2.4: US-EPA Tier 1 full useful life SFTP standards in [g/mi] [6]

Vehicle Class	NMHC + NO_x [a,c]	CO [b,c]		
		US06	SC03	Weighted
LDV/LDT1	0.91 (0.65)	11.1 (9.0)	3.7 (3.0)	4.2 (3.4)
LDT2	1.37 (1.02)	14.6 (11.6)	4.9 (3.9)	5.5 (4.4)
LDT3	1.44	16.9	5.6	6.4
LDT4	20.9	19.3	6.4	7.3

a) *Weighting for NMHC + NO_x and optional weighting for CO is 0.35*(FTP) + 0.28*(US06) + 0.37*(SC03)*

b) *CO standards are stand alone for US06 and SC03 with option for a weighted standard*

c) *Intermediate life standards are shown in parentheses for diesel LDV/LLDTs opting to calculate intermediate life SFTP standards in lieu of 4,000 mile SFTP standards as permitted.*

Table 2.5: US-EPA Tier 1 full useful life FTP standards in [g/mi] [6]

Vehicle Class	NMHC [a]	NO_x [a]	CO [a]	PM
LDV/LDT1	0.31 (0.25)	0.60 (0.40)	4.2 (3.4)	0.10
LDT2	0.40 (0.32)	0.97 (0.70)	5.5 (4.4)	0.10
LDT3	0.46	0.98	6.4	0.10
LDT4	0.56	1.53	7.3	0.12

a) *Intermediate life standards are shown in parentheses for diesel LDV/LLDTs opting to calculate intermediate life SFTP standards in lieu of 4,000 mile SFTP standards as permitted*

In-use testing of light duty vehicles under the Tier 2 regulation involves testing of vehicles on a chassis dynamometer that have accumulated at least 50,000 miles during in-use operation, to verify compliance with FTP and SFTP emissions standards at intermediate useful life. There has been no regulatory requirement in the United States to verify compliance of Tier 2 vehicles for emissions standards over off-cycle tests such as on road emissions testing with the use of PEMS equipment, similar to what is being mandated for heavy-duty vehicles via the engine in-use compliance requirements (i.e. NTE emissions). Meanwhile, the European Commission (EC) has established a working group to propose modifications to its current vehicle certification procedures in order to better limit and control off-cycle emissions [7]. Over the course of a two-

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year evaluation process, different approaches were being assessed with two of them believed to be promising for application in a future light-duty emissions regulation, namely; i) emissions testing with random driving cycle generation in the laboratory, and ii) on-road emissions testing with PEMS equipment [7].

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3 METHODOLOGY

The following section of the report will discuss the test vehicles selected for this study, describe the specific test routes and their characteristics, as well as present the emissions sampling setup and instrumentation utilized during this work.

3.1 Test Vehicle Selection

The vehicles tested in this study comprise two MY 2012 and one MY 2013, diesel-fueled passenger cars of European make, and will hereinafter be referred to as '*Vehicle A*', '*Vehicle B*', and '*Vehicle C*' in order to anonymize model- and make-specific information for the purpose of this report. *Vehicle A* and *Vehicle B* were equipped with the same 2.0L turbocharged, four cylinder base engine. However, they were equipped with two different NO_x reduction technologies. *Vehicle A* featured a lean NO_x trap (LNT) for NO_x abatement, whereas *Vehicle B* was fitted with an aqueous urea-based selective catalytic reduction system. Both vehicles had a DPF installed for controlling particulate matter emissions. *Vehicle C* was fitted with a 3.0L turbocharged in-line six-cylinder engine in conjunction with an aqueous urea-SCR system and DPF for NO_x and PM control, respectively. The drive-train of both *Vehicles A* and *B* comprised 6-speed automatic transmissions with front wheel drive, whereas *Vehicle C* featured all-wheel drive with a 6-speed automatic transmission.

All three test vehicles were compliant with EPA Tier2-Bin5, as well as California LEV-II ULEV (for *Vehicles A* and *B)* and LEV-II LEV (for *Vehicle C*) emissions standards as per EPA certification documents. *Vehicles A* and *B* are categorized as '*light-duty vehicles*' (LDV) whereas *Vehicle C* as '*light-duty truck 4*' (LDT4). Actual CO_2 emissions and fuel economy for city, highway, and combined driving conditions, as well as tailpipe CO_2 values as advertised by the EPA for new vehicles sold in the US are given in Table 3.1 for all three test vehicles.

Vehicle A and *Vehicle C* were rented from two separate rental agencies and had initial odometer readings of 4,710 and 15,031 miles, respectively. *Vehicle B* had 15,226 miles at start of testing and was acquired from a private owner. Furthermore, all three test vehicles were thoroughly checked for possible engine or after-treatment malfunction codes using an ECU scanning tool prior to selecting a vehicle for this on-road measurement campaign, with none of them showing any fault code or other anomalies. The after-treatment system was assumed to be

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'*de-greened*' as all three vehicles have accumulated more than 3,000 to 4,000 miles, and no reduction in catalytic activity due to aging was expected as the total mileage was relatively low (< 15,000 miles) for all test vehicles. More specific details for the three test vehicles are presented in Table 3.1.

Table 3.1: Test vehicles and engine specifications

Vehicle		**A**	**B**	**C**
Mileage at test start [miles]		4,710	15,226	15,031
Fuel		ULSD	ULSD	ULSD
Engine displacement [l]		2.0	2.0	3.0
Engine aspiration		Turbocharged/ Intercooled	Turbocharged/ Intercooled	Turbocharged/ Intercooled
Max. engine power [kW]		104 @ 4200 rpm	104 @ 4200 rpm	198
Max. engine torque [Nm]		320 @ 1750 rpm	320 @ 1750 rpm	-
Emission after-treatment technology		OC, DPF, LNT	OC, DPF, urea-SCR	OC, DPF, urea-SCR
Drive train		2-wheel drive, front	2-wheel drive, front	4-wheel drive
Applicable emissions limit	*U.S. EPA*	T2B5 (LDV)	T2B5 (LDV)	T2B5 (LDV)
	CARB	LEV-II ULEV	LEV-II ULEV	LEV-II LEV
EPA Fuel Economy Values [mpg] [1)]	*City*	29	30	19
	Highway	39	40	26
	Combined	33	34	22
EPA CO_2 Values [g/km] [1)]		193	186	288

[1)] *EPA advertised fuel economy and CO_2 emissions values for new vehicles in the US (www.fueleconomy.gov)*

Table 3.2 lists the individual curb weights, gross vehicle weight ratings (GVWR), and actual test weights while performing the on-road PEMS testing. Actual test weights were calculated as the sum of manufacturer specified vehicle curb weights and physically acquired weights of the payload on a scale. The payload comprised the entire instrumentation and associated equipment, including pressurized gas bottles for the emissions analyzers, as well as the weight of a driver and passenger of 77kg each. The total payload for *Vehicle C* was approximately 200kg heavier than for *Vehicles A* and *B* due to additional instrumentation as will be explained in more detail in Section 3.3. Table 3.2 further allows for a comparison between the actual test weight of the three vehicles during PEMS testing and the respective equivalent test weight (ETW) as applied during

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emissions certification testing on the chassis dynamometer according to 40 CFR paragraph 86.129-00(f)(1).

The diesel fuel used during this study was commercially available ultra low diesel fuel (ULSD) in California. Fuel for *Vehicles A* and *B* originated from the same batch and was purchased from a truck stop in Fontana, CA. A fuel analysis showed a sulfur content of 5ppm (via Microcoulometry, ASTM D3120, see Appendix 7.3 for more details). This diesel fuel used for *Vehicles A* and *B* was also used for chassis testing. The fuel used during on-road testing of *Vehicle C* was purchased from the Quick Gas Valero fuel station in Ontario, CA. ULSD used for the California to Washington State trip with *Vehicle B* was purchased exclusively from Shell fuel stations along highway I-5. Specifically, the test vehicle was refueled six times during the entire trip, namely in Kettleman, CA, Redding, CA, Vancouver, WA, Olympia, WA, Medford, OR and finally Gustine, CA.

Table 3.2: Test weights for vehicles

Vehicle	Curb Weight [kg]	GVWR [kg]	Payload [kg]	Actual Test Weight [kg]	Equiv. Test Weight [kg]
Vehicle A	1550	2010	305	1855	1701
Vehicle B	1570	2110	314	1884	1701
Vehicle C	2370	3001	533	2903	2495

3.2 Vehicle Test Routes

On-road PEMS testing was grouped into two main route categories for this study, with one comprising a set of strictly defined test routes that were used for all test vehicles and the other containing predominantly highway driving solely defined by the departure and final destination, specifically, Los Angeles, CA as the starting point and Seattle, WA as the end point, that was only used in conjunction with *Vehicle B*. Section 3.2.1 will describe the pre-defined test routes of category one in more detail, whereas Section 3.2.2 will highlight the characteristics of the multi-state driving route between California and Washington State.

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3.2.1 Pre-defined Test Routes

Five test routes were defined within the three primary population centers in California, namely, Los Angeles, San Diego, and San Francisco, aimed at reflecting a rich diversity of topological characteristics, driving patterns, as well as ambient conditions, that are expected to be representative of typical vehicle operation within the given areas. The routes can be split into four categories, including i) *highway operation*, characterized by high speed driving during regular hours and frequent stop/go patterns during rush-hours, ii) *urban driving*, characterized by low vehicle speeds and frequent stop and go, iii) *rural driving*, medium vehicle speed operation with occasional stops in the suburbs of the selected metropolitan areas, and finally iv) *uphill/downhill driving*, characterized by steeper than usual road grades and medium to higher speed vehicle operation. Table 3.3 summarizes the characteristics of the five defined test routes whose driving patterns are described as follows:

1) Route 1: highway driving in Los Angeles
2) Route 2: urban driving in downtown Los Angeles
3) Route 3: rural and uphill/downhill driving in Los Angeles' foothills
4) Route 4: urban driving in downtown San Diego
5) Route 5: urban driving in downtown San Francisco

Table 3.3: Comparison of test route and driving characteristics

Route	Route 1[1)]	Route 2[2)]	Route 3	Route 4[2)]	Route 5[2)]
Route distance [km]	70.18	25.67	59.09	21.22	26.72
Avg. vehicle speed [km/h]	77.85	24.09	52.27	26.54	24.69
Max. vehicle speed [km/h]	112.65	92.57	112.65	109.87	112.65
Avg. RPA [3)] [m/s^2]	0.24	0.27	0.26	0.30	0.33
Characteristic Power [m^2/s^3]	2.57	2.24	3.93	2.60	2.97
Min. elevation [m a.s.l. [4)]]	46.0	42.1	300.1	1.1	1.0
Max. elevation [m a.s.l]	360.1	123.5	1319.7	101.4	190.9
Share [%] (*time based*)					
- idling (≤2 km/h)	7.0	23.8	13.5	26.8	27.9
- low speed (>2≤50 km/h)	20.5	64.2	23.9	57.0	58.9
- medium speed (>50≤90 km/h)	14.9	11.2	55.6	12.9	7.5
- high speed (>90 km/h)	57.7	0.8	7.0	3.3	5.6

[1)] *week-day, non-rush-hour driving conditions*
[2)] *typical week-day driving conditions*
[3)] *RPA - relative positive acceleration*
[4)] *a.s.l. - above sea level*

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Route and driving characteristics provided in Table 3.4 are representative of typical week-day driving conditions for the urban routes (i.e. Routes 2, 4, and 5), and non-rush-hour, week-day driving conditions for highway driving (i.e. Route 1). Relative positive acceleration (RPA) is a frequently used metric for analysis of route characteristics [1, 8] and will be described in more detail later in this section (see Eq. 4 and 5). '*Characteristic Power*' is a metric derived by Delgado *et al.* [9, 10] taking kinematic power and grade changes over the driving route into account, and is representative of the positive mechanical energy supplied per unit mass and unit time. Delgado *et al.* [9, 10] described '*Characteristic Power*' as outlined in Equation 3 having units [m^2/s^3 or W/kg] with 'T' being the duration of the route, 'g' the gravitational acceleration (i.e. 9.81m/s^2), 'v_i' and 'h_i' being the vehicle speed and altitude at each time step, respectively.

Eq. 3

For comparison reason with the five defined test routes, Table 3.4 provides a summary containing the same metrics as shown in Table 3.3 for a set of chassis dynamometer vehicle certification test cycles that are currently used by the US EPA (FTP-75, US06) and the European Union (NEDC). It can be noticed that the US06 cycle shows similar maximum and average speed patterns as the highway (i.e. Route 1) and uphill/downhill (i.e. Route 3) routes, whereas the FTP-75 closer represents maximum and average speed characteristics of the urban test routes (i.e. Route 2, 4, and 5).

Table 3.4: Comparison of characteristics of light-duty vehicle certification cycles

Cycle	FTP-75	US06	NEDC
Cycle duration [sec]	1877	596	1180
Cycle distance [km]	17.77	12.89	10.93
Avg. vehicle speed [km/h]	34.08	77.84	33.35
Max. vehicle speed [km/h]	91.25	129.23	120.00
Avg. RPA [3] [m/s^2]	0.23	0.52	0.15
Characteristic Power [m^2/s^3]	1.65	4.55	1.04
Share [%] (*time based*)			
- idling (≤2 km/h)	19.6	7.2	24.8
- low speed (>2≤50 km/h)	59.3	18.8	53.9
- medium speed (>50≤90 km/h)	19.5	18.0	14.2

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- high speed (>90 km/h)	1.6	56.0	7.0

The topographic map of Route 1 is depicted in Figure 3.1. Route 1 is ~70 kilometers in distance and comprises approximately 95% highway driving between the convention center in Ontario and the main campus of the University of Southern California (USC) South of downtown LA, following interstate I-10 East and highway 110 South till exit 20B (W. Exposition Blvd.). Average vehicle speed during day-time and outside morning or evening rush-hours was ~77.8 km/h.

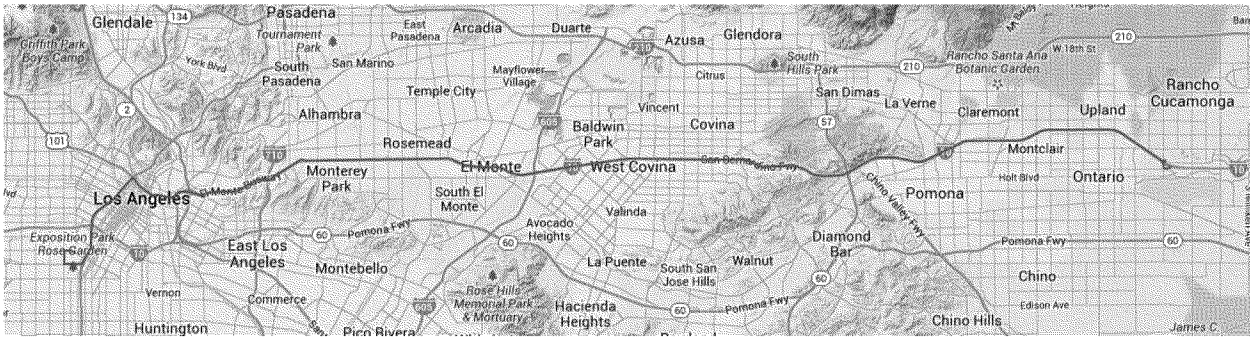

Figure 3.1: Topographic map of Route 1, highway driving between Ontario and downtown LA

Figure 3.2: Topographic map of Route 2, urban driving downtown Los Angeles

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Figure 3.2 shows the topographic map of Route 2, representative of urban driving downtown Los Angeles. This route essentially represents the "*Los Angeles Route Four*" (i.e. LA4) which was ultimately used in developing the original FTP vehicle certification cycle [11], with some minor modifications at locations where the traffic pattern or roads have changed since the FTP's development. The route is ~25.6 km long, and started and terminated at USC's main campus on Jefferson Blvd. From USC the route followed westwards on W. Exposition Blvd., then North on S. Western Ave. till W. Olympic Blvd. From there it turned eastwards and followed W. Olympic Blvd. till S. San Pedro Street, then North on S. San Pedro St., and again West on W. Temple Street before merging onto highway 110 South leading back to the USC campus (Exit 20B, W. Exposition Blvd.). Even though the route contains ~5.3 km or 20% of highway driving on Hwy 110-S, the average vehicle speed is only marginally affected due to highly dense traffic on this portion of Hwy 110-S with many roads intersecting or merging.

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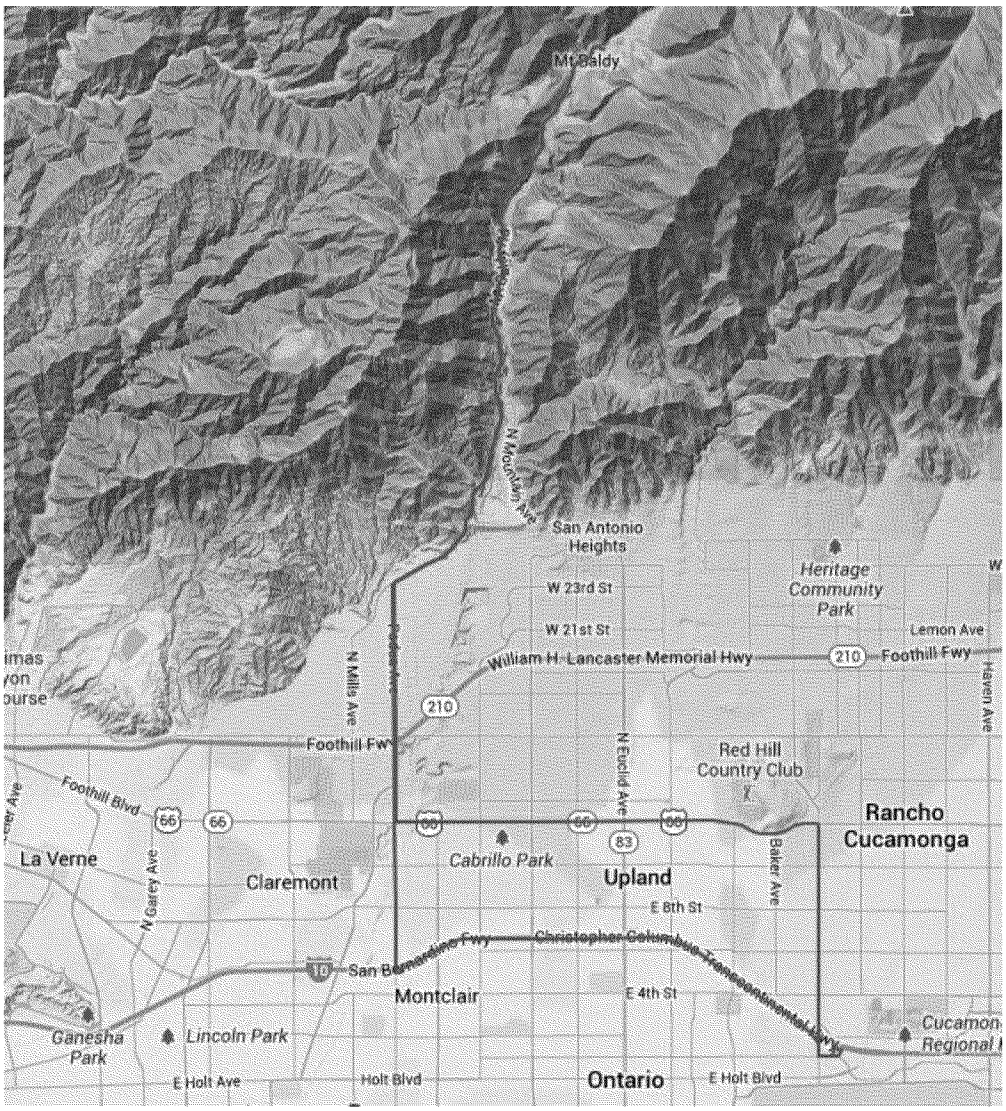

Figure 3.3: Topographic map of Route 3, rural-up/downhill driving between Ontario and Mt. Baldy

The topographic map of Route 3, representative of rural and uphill/downhill driving is shown in Figure 3.3. The route is ~59 kilometers in distance and experiences an elevation change of approximately 1000 meters between the lowest and highest points of the route. The route starts and terminates at the convention center in Ontario, CA and follows Foothill Blvd. eastwards till the intersection with Mt. Baldy Rd. From there the route climbs up a windy road to Mt. Baldy and back. On the return the route follows for ~9km on interstate I-10 East, which represents 15% of the total route's distance. The average vehicle speed for Route 3 is 52.3 km/h.

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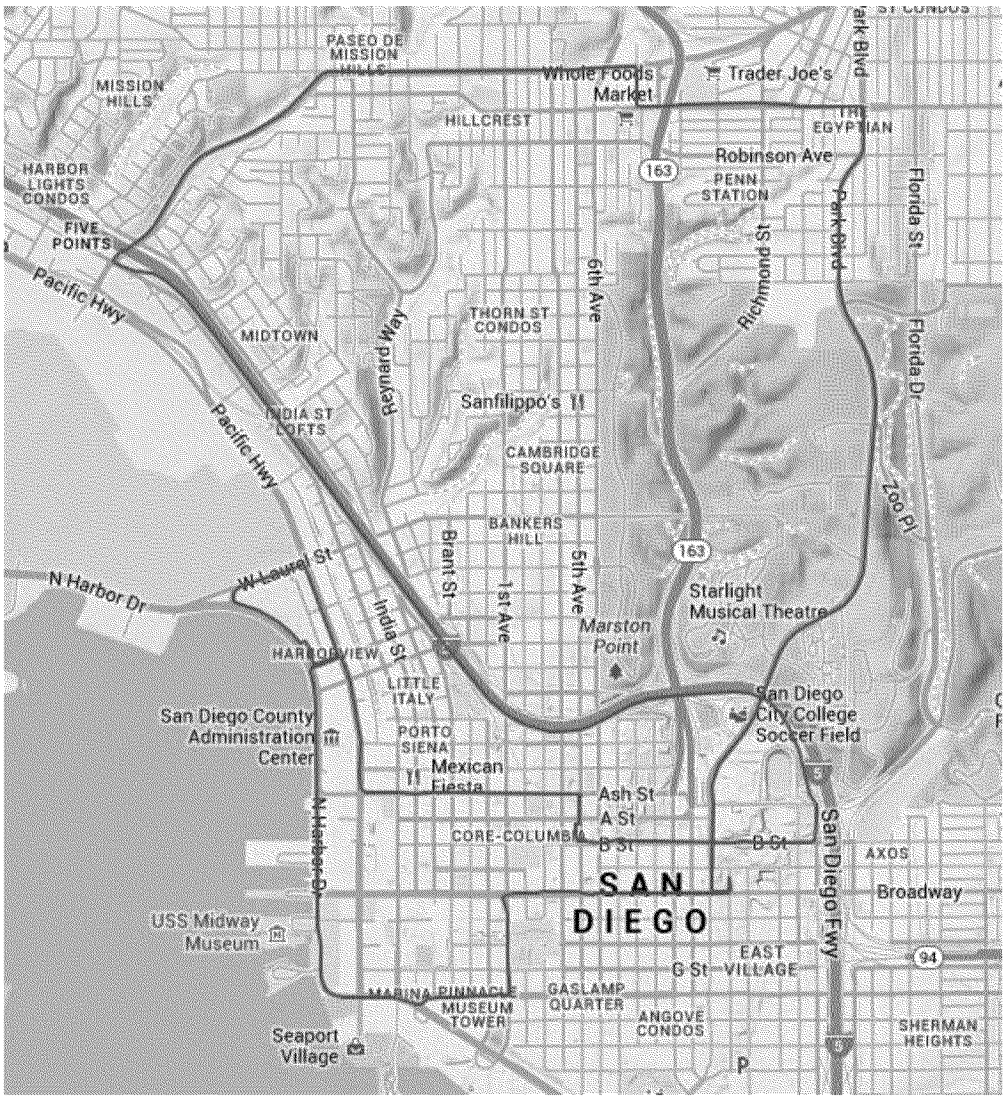

Figure 3.4: Topographic map of Route 4, urban driving downtown San Diego

Figure 3.4 depicts the topographic map of the urban driving route, Route 4, in downtown San Diego. Route 4 is slightly shorter when compared to Route 2, approximately 21 km in length; however, it experiences more elevation changes than the downtown LA route. The route starts and terminates at the harbor at sea level (N. Harbor Drive). It first follows along the harbor then leads through downtown before climbing up on Park Blvd. to the Bridgeview and Hillcrest neighborhood. From there the route follows W. Washington St. to San Diego airport where it merges onto interstate I-5 South till Exit B St., and then going back through downtown to the harbor again. Route 4 comprises roughly 20% or 4.2 km of highway driving on interstate I-5 South. However, similar to Route 2, this portion of I-5 is heavily congested throughout the day,

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thus not significantly affecting the average vehicle speed of Route 4 which was measured as ~26.5 km/h.

Figure 3.5: Topographic map of Route 5, urban driving downtown San Francisco

Finally, the topographic map of Route 5 is shown in Figure 3.5. Route 5 is located in and around downtown San Francisco and is specifically characterized by faster speed changes of the traffic flow and steep inclines and declines of the road when compared to the two other urban routes in LA and San Diego. In terms of average vehicle speeds Route 5 is similar to Routes 2 and 4; however, it exhibited highest average relative positive acceleration of all three urban

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routes. The route is ~26.7 km in distance and starts as well as terminates in the Marina District on Marina Blvd. From there the route goes southwards to Eureka Valley area and climbs over Diamond Heights neighborhood before merging onto highway 280 North and descending back to downtown and the Financial District. Approximately 28% of the entire route or 7.4 km are driven on highway 280.

Figure 3.6 presents a comparison of vehicle speed distributions for all five test routes and three regulatory vehicle certification cycles over four distinct vehicle speed bins defined as i) *idle*, speeds at or below 2 km/h, ii) *low speed*, speeds higher than 2 km/h and lower or at 50 km/h, iii) *medium speed*, speeds higher than 50 km/h and lower or at 90 km/h, and finally iv) *high speed*, speeds higher than 90 km/h. Vehicle speed bins ii, iii and iv can alternatively be described as urban, rural, and highway operation, respectively, following the notation used by Weiss *et al.* [1]. It can be noticed from Figure 3.6 that highway driving (i.e. Route 1, week-day non-rush-hour) is similar to the US06 chassis dynamometer schedule as both show the same vehicle speed distribution pattern. A similar conclusion can be drawn between the three urban routes and two certification cycles FTP-75 and NEDC. Route 3, the rural and up/downhill route on the other hand is not well represented by any of the three certification cycles as they all lack significant medium speed operation. At vehicle speeds below 50 km/h Route 3 shows similar speed distributions as the US06 cycle. One observation from Figure 3.6 is that the introduction of the US06 test cycle to the US light-duty vehicle certification process has led to a better representation of high-speed vehicle operation as compared to the FTP-75.

It has to be noted that data presented in Figure 3.6 are representative of week-day, non-rush-hour driving conditions for highway driving (i.e. Route 1) and typical week-day traffic conditions for the urban routes (i.e. Route 2, 4, and 5). Changing traffic densities, for example during morning or evening rush-hours as opposed to regular day-time traffic conditions can lead to significant alterations in driving characteristics for a given test route.

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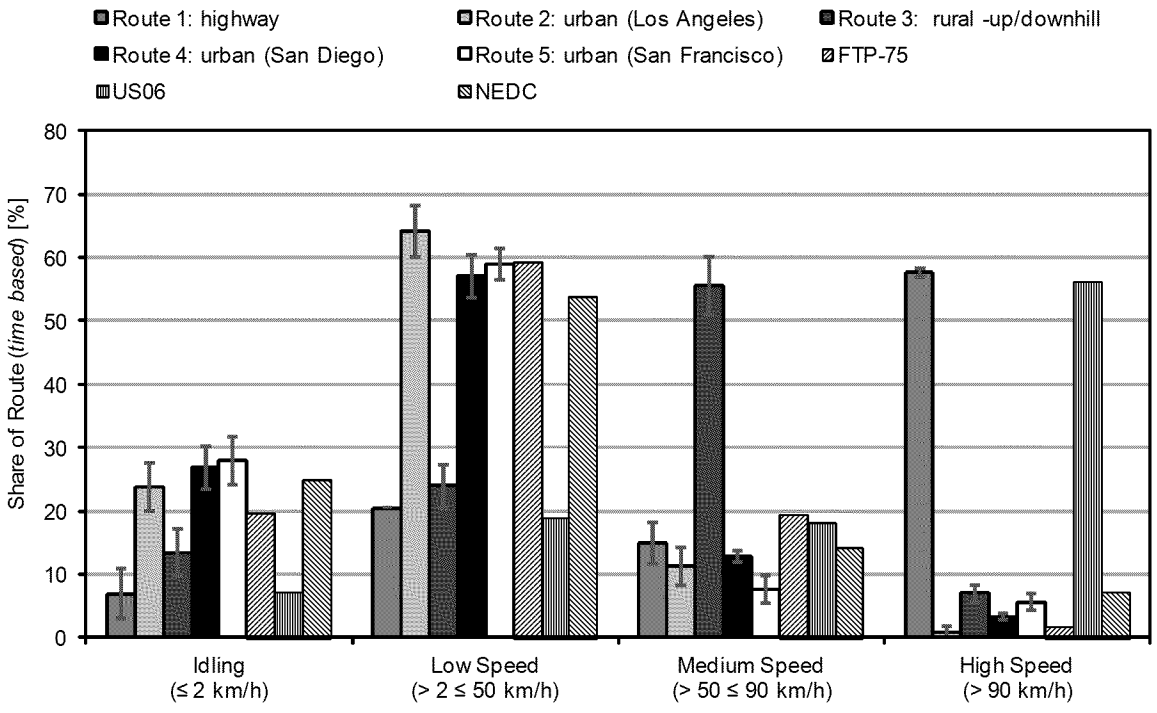

Figure 3.6: Comparison of vehicle speed distribution (*time based*) over the test routes and certification cycles, red bars represent ±1σ

Table 3.5: Comparison of test route and driving characteristics with low and high traffic densities

Route	Route 1 low traffic [1)]	Route 1 high traffic [2)]	Diff [%]	Route 2 low traffic [3)]	Route 2 high traffic [4)]	Diff [%]
Route distance [km]	70.18	71.11	*-1.3*	25.67	25.67	*0.0*
Avg. vehicle speed [km/h]	77.85	42.41	*45.5*	37.70	24.09	*36.1*
Max. vehicle speed [km/h]	112.65	112.65	*0.0*	110.27	92.57	*16.1*
Avg. RPA [3)] [m/s^2]	0.24	0.21	*11.3*	0.31	0.27	*11.8*
Characteristic Power [m^2/s^3]	2.57	2.50	*2.7*	3.27	2.24	*31.4*
Share [%] (*time based*)						
- idling (≤2 km/h)	7.0	7.8	*-11.9*	15.8	23.8	*-50.3*
- low speed (>2≤50 km/h)	20.5	59.0	*-188.1*	48.7	64.2	*-31.9*
- medium speed (>50≤90 km/h)	14.9	19.7	*-32.3*	29.9	11.2	*62.6*
- high speed (>90 km/h)	57.7	13.5	*76.6*	5.6	0.8	*85.8*

[1)] *week-day, non-rush-hour driving conditions*
[2)] *week-day, evening-rush-hour driving conditions*
[3)] *typical week-day driving conditions*
[4)] *weekend (holiday) driving conditions*

Table 3.5 compares the route characteristics of Route 1 and 2 between low and high traffic densities. In case of Route 2, urban driving downtown LA, the traffic densities during weekdays were usually high with an average vehicle speed of ~24 km/h and frequent stop/go patterns. This

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can be underlined by the fact that both *Vehicles A* and *B* were tested on two random and regular working weekdays in the afternoon between 13:00 and 16:00 and both experienced the same route characteristics. On the other hand, the low traffic characteristics for Route 2, shown in Table 3.5, were measured during testing of *Vehicle C* which happened to fall on Memorial Day Monday (May 27, 2013) in the afternoon between 14:00 and 18:00. Due to the holiday, downtown traffic was greatly reduced and average vehicle speeds rose by 36% from ~24 to 37.7 km/h. Overall, the share of medium speeds increased by 62% while the idling portion dropped significantly by 50%. Another example of the strong influence of traffic densities onto route characteristics is given for Route 1, the highway operation. Table 3.5 shows a comparison for *Vehicle A* between low traffic conditions while driving from Ontario to downtown LA during regular daytime traffic (around 11:30), and high traffic densities going from downtown LA towards Ontario (same route, opposite direction) during evening rush-hours (around 16:30) when a large number of people were leaving their offices/workplaces and driving back to their suburban homes. As a result, the average speed dropped by 46% from 77.9 to 42.4 km/h, while the time to cover the same distance nearly doubled from 54min to 1h 41min. Figure 3.7 shows how the speed distributions changed and the low speed bin's share increased from 20% to nearly 60% while at the same time the share of speeds above 90 km/h dropped by 77% from 58% to merely 14% of the entire route.

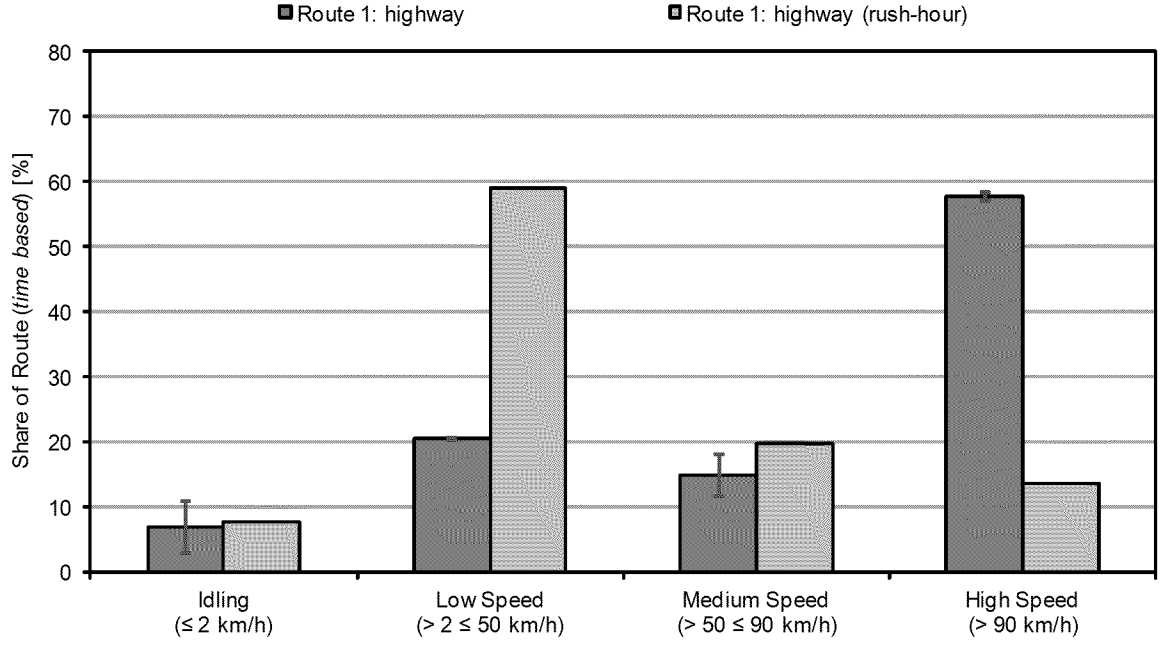

Figure 3.7: Comparison of vehicle speed distribution (*time based*) over Route 1 during low traffic

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and rush-hour, red bars represent ±1σ

Figure 3.8 summarizes the cumulative frequencies of the vehicle speeds for all three test vehicles and Routes 1 through 4 in comparison to three chassis dynamometer certification cycles. It has to be noted that for comparison purposes, vehicle speed data presented herein for chassis dynamometer cycles is based on vehicle speed set-point rather than actually measured data. As already concluded from Figure 3.6 and Table 3.3, the top left graph in Figure 3.8 confirms again the representativeness of the US06 cycle of highway driving during non-rush-hour vehicle operation. In stark contrast are cumulative frequency pattern for vehicle operation during rush-hours (i.e. high traffic densities) as shown by one *Vehicle A* and one *Vehicle B* test run. Highway speed patterns during rush-hours seem to be close to FTP-75 or NEDC vehicle operation characteristics.

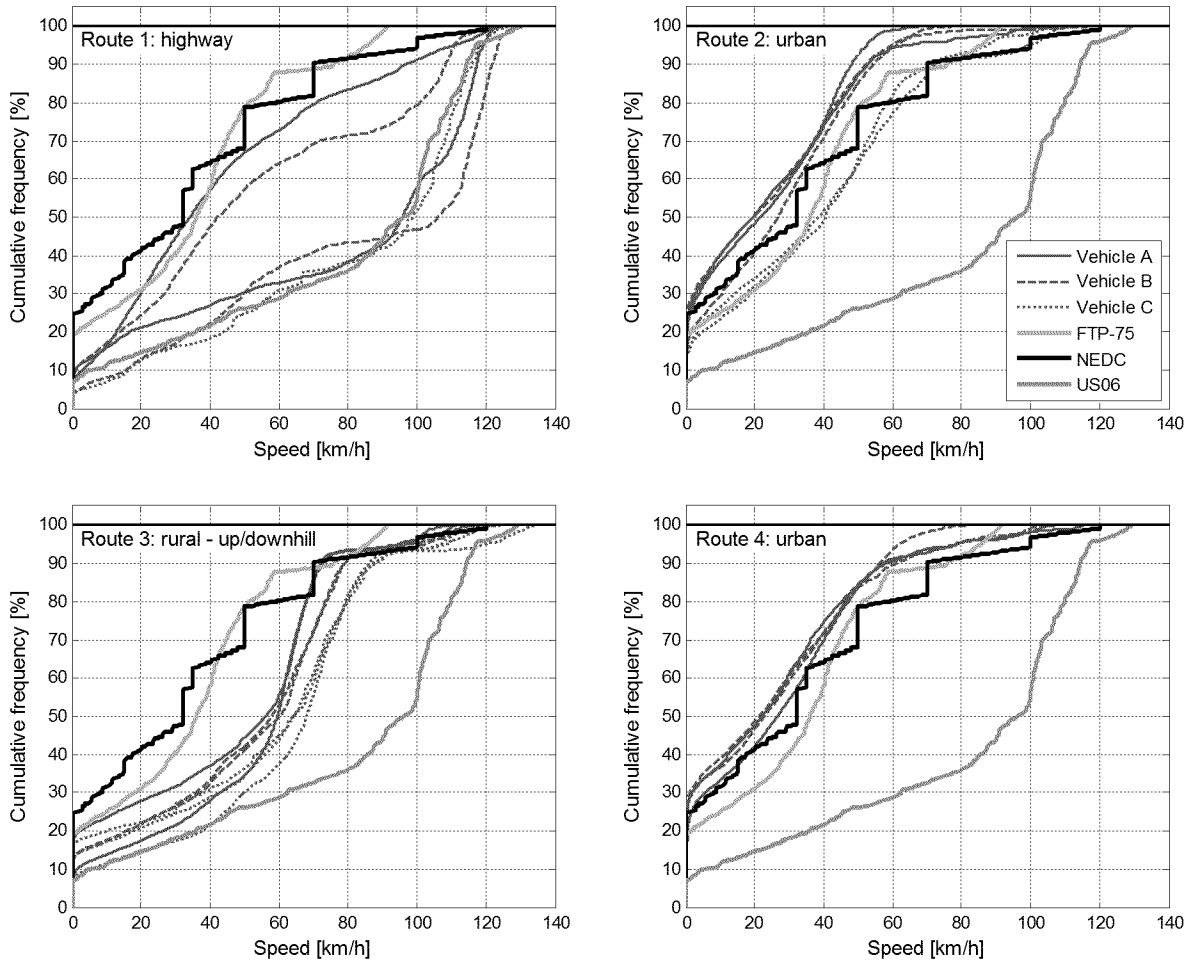

Figure 3.8: Vehicle speed distributions of test routes 1 through 4 in comparison to certification test

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cycles (FTP-75, US06, and NEDC, based on speed set-point data)

Urban driving in downtown LA and San Diego are shown to exhibit cumulative frequencies of vehicle speeds close to the frequencies of FTP-75 and NEDC certification cycles, although mostly slightly on the slower side compared to the certification cycles (top right and bottom right graphs). Route 2 driving for Vehicle C shows a noticeable difference when compared to both *Vehicles A* and *B* (top right graph) as previously discussed. The bottom left graph in Figure 3.8 shows rural and uphill/downhill driving, emphasizing again its significant contribution to the medium speed range, which is poorly represented by any of the three light-duty certification cycles depicted herein.

The altitude profiles for all five test routes are compared in Figure 3.9 in terms of elevation above sea level (i.e. meter a.s.l.). The majority of urban routes varied between sea level and 100 meters, with the San Francisco route (Route 5) being the only one exhibiting elevation changes more frequently with a range of ~200 meters from lowest to highest point.

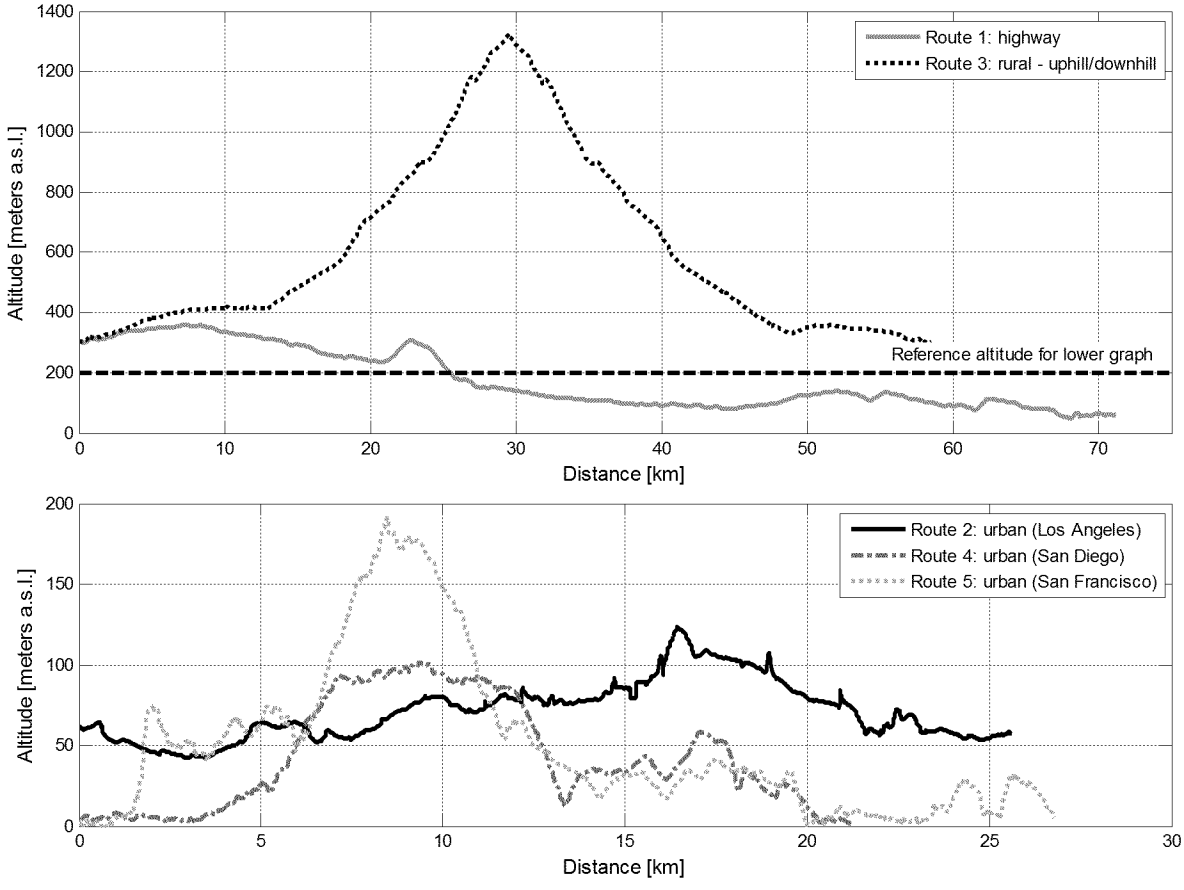

Figure 3.9: Altitude profiles of test routes given in meters above sea level (a.s.l.)

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The uphill/downhill driving route experienced an elevation change of approximately 1000 meters, starting at about 300 meters a.s.l. with a turning point at 1300 meters a.s.l. The road grade was on the order of 5.5 to 6% over a distance of ~16 km (between distance marker 14 and 30km). The same road grade applied for the downhill portion of the route, as the same road was chosen to drive back from Mt. Baldy. The primary measure of altitude during the course of this study was the GPS signal. However, due to sporadically deteriorating GPS reception, caused by a multitude of factors, including but not limited to heavy cloud overcast, road tunnels and underpasses (e.g. bridges), as well as high buildings in downtown areas, an alternative backup method to calculate altitude was employed by means of measuring changes in barometric pressure as a function of altitude using a high resolution pressure transducer. The latter method has proven, during previous studies at WVU [9, 12], to be more accurate for the purpose of calculating road grade changes, however, it is plagued by the requirement to consider local weather conditions as changes in environmental conditions will lead to changing barometric pressures, hence, offset the altitude calculation.

Equation 3 shows a simplified version of the formula used to calculate altitude 'H' as a function of reference temperature 'T_0' and pressure 'p_0' at ground level as well as the actually measured barometric pressure 'p_{baro}'. With 'L' being the temperature lapse rate, 0.0065K/m, and g, M, R being the gravitational acceleration, molar mass of dry air and universal gas constant, respectively [12]. Equation 3 is derived from the International Standard Atmosphere (ISA) model which has been formulated by the International Civil Aviation Organization (ICAO) and is based on assuming ideal gas, gravity independence of altitude, hydrostatic equilibrium, and a constant lapse rate [9].

Eq. 3

Figure 3.10 shows a sample of the individual vehicle speed profiles for all five test routes as a function of driving time during week-day, non-rush-hour conditions for highway driving (i.e. Route 1) and typical week-day traffic conditions for the urban routes (i.e. Route 2, 4, and 5).

Figure 3.11 depicts ambient conditions, including temperature, barometric pressure, and

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relative humidity experienced during the five test routes for *Vehicles A* through *C*. The variation intervals (red bars) represent minimum and maximum values encountered over the test route. An increase in the observed range of barometric pressure (i.e. minimum to maximum value) is indicative of larger elevation changes experienced over a given test route (see Figure 3.9 for altitude profiles).

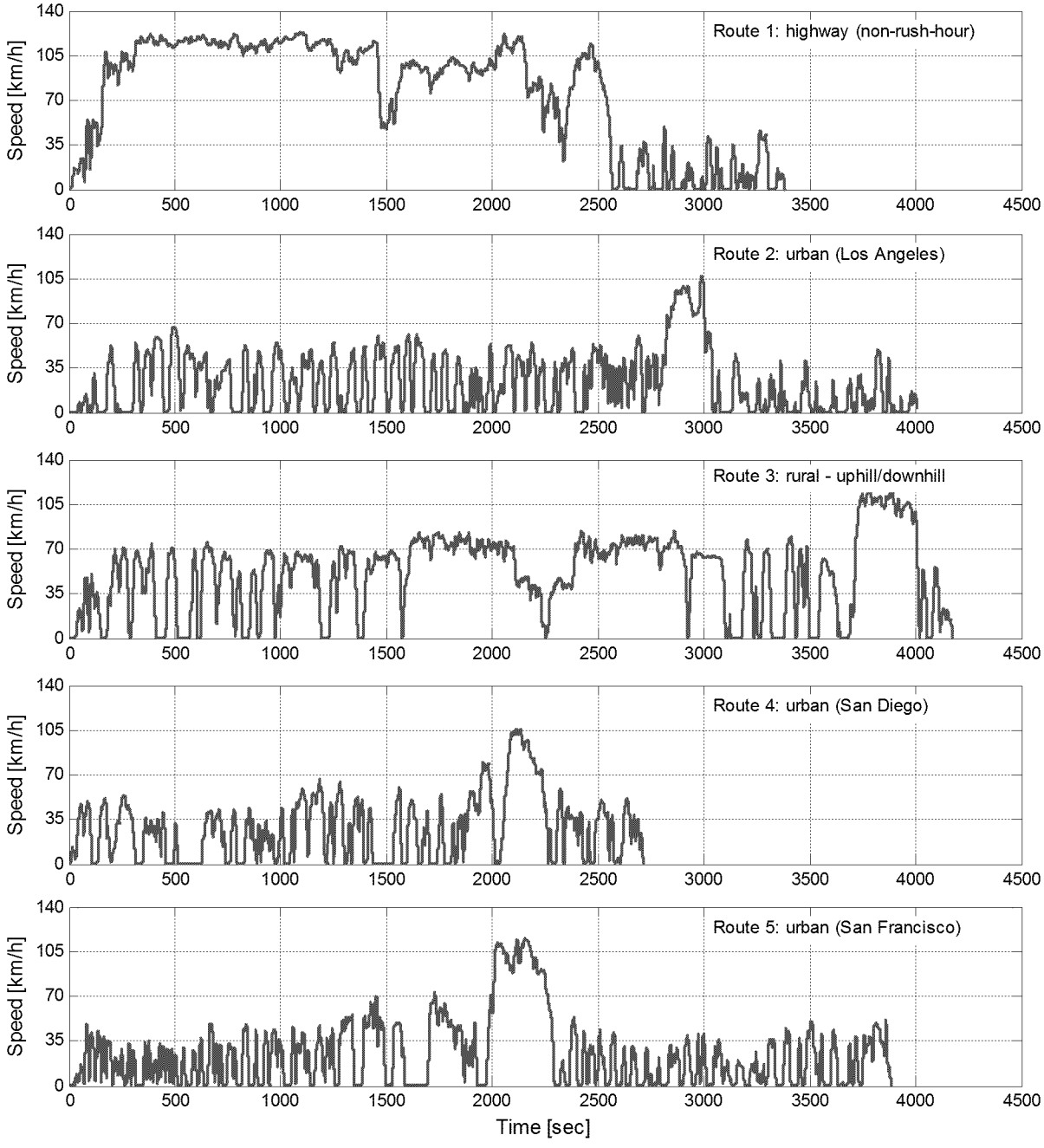

Figure 3.10: Characteristic vehicle speed vs. time for five test routes during typical week-day non-rush-hour traffic densities for highway and urban driving

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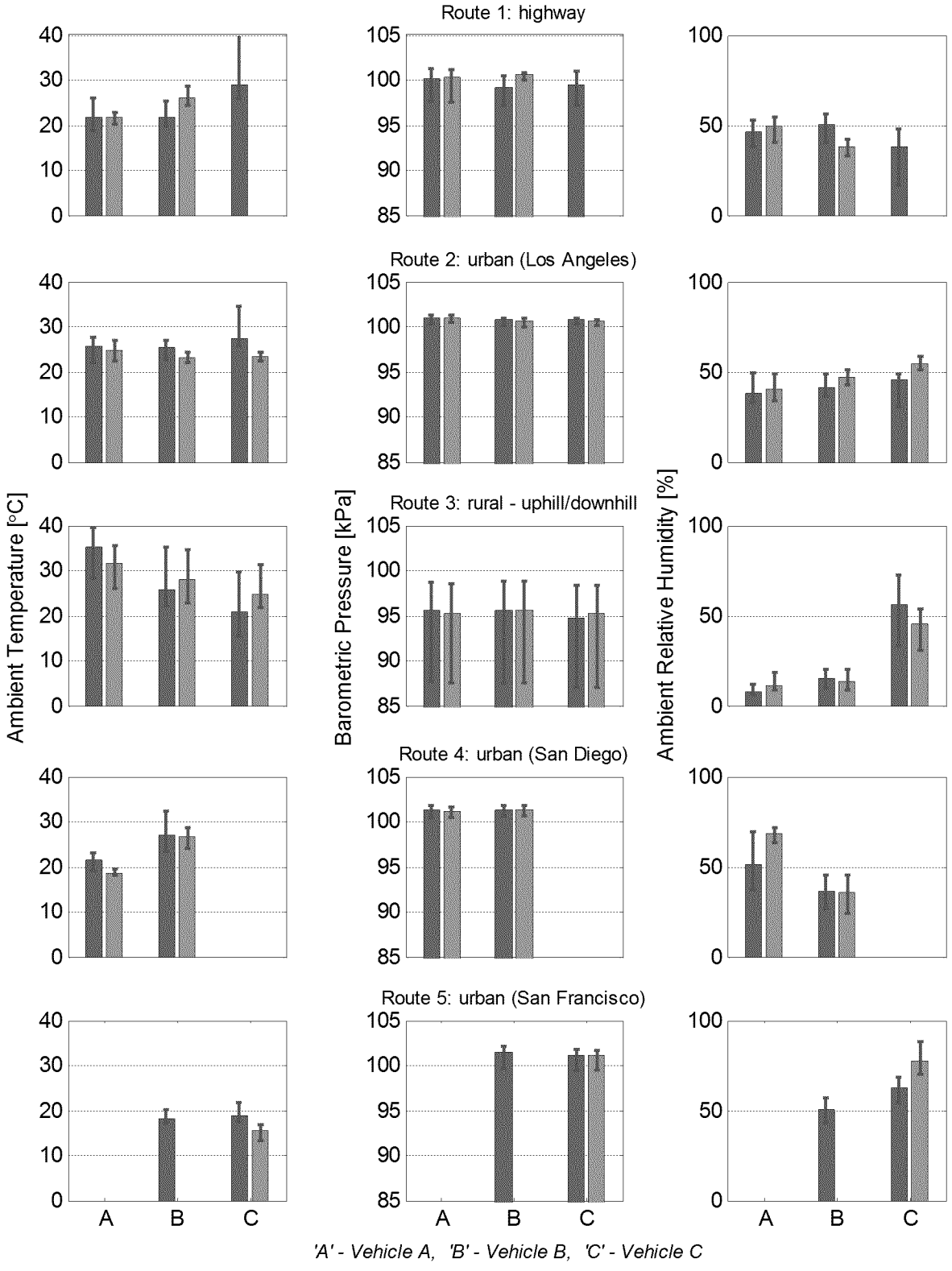

Figure 3.11: Average ambient conditions (temperature, barometric pressure, and relative humidity) experienced over five test routes for all three vehicles. Note: variation intervals (red bars) refer to minimum and maximum values experienced over the test route

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Relative positive acceleration (RPA) is a frequently used metric [1, 8] for the analysis of driving patterns and as input parameter to aid in developing chassis dynamometer test cycles representative of real-world driving. The RPA is calculated as the integral of the product of vehicle speed and positive acceleration for each instance in time, over a given '*micro-trip*' of the test route under investigation as shown by Equation 4. For this study a '*micro-trip*' was defined following the same convention as proposed by Weiss *et al.* [1] as any portion of the test route, where the vehicle speed is equal or larger than 2 km/h for a duration of at least 5 seconds or more. Instantaneous vehicle acceleration was calculated according to Equation 5 by means of differentiating vehicle speed data collected via GPS, and subsequently filtered with negative values being forced to zero.

Eq. 4

where: t_j duration of micro-trip j

x_j distance of micro-trip j

v_i speed during each time increment i

a_i instantaneous positive acceleration during each time increment i contained in the micro-trip j

Eq. 5

Figure 3.12 and Figure 3.13 depict the relative positive accelerations for routes 1 through 4, and 5, respectively, in comparison to RPAs for three chassis dynamometer vehicle certification test cycles (note: using vehicle speed set-point data for calculations). A distinct pattern can be recognized between the highway, rural, and urban test routes. The urban routes show a predominant cluster in the range of 15 to 40 km/h with RPA values between 0.2 and 0.6 m/s^2, and up to 0.8 m/s^2 for the San Francisco route. The latter was characterized by more pronounced grade changes (i.e. increased '*hilliness*') and '*aggressiveness*' of the driving pattern (i.e.

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increased stop-go). Furthermore, RPA values for the urban routes show similarity to RPA values calculated for the FTP-75 certification cycle. Average RPA values are shown in Table 3.3.

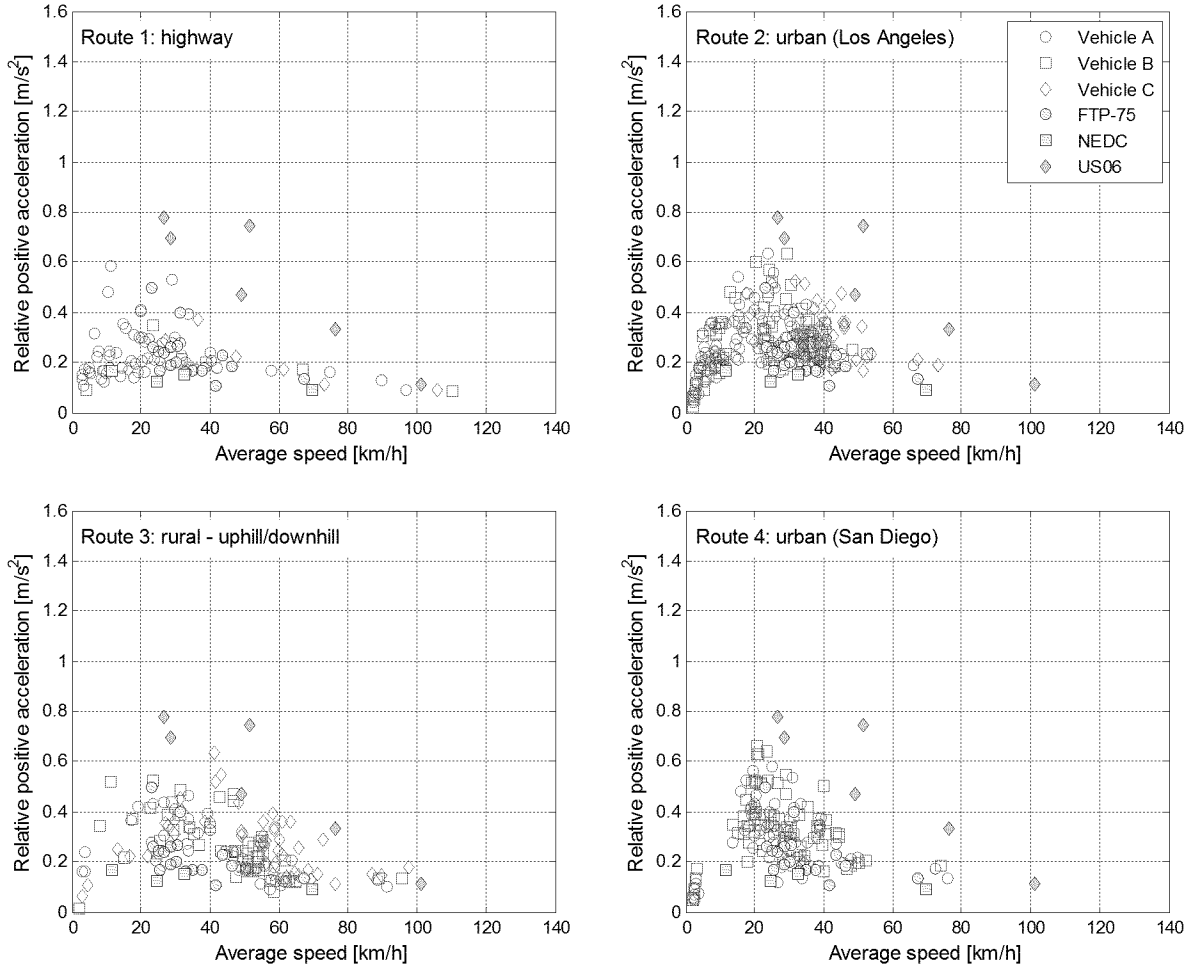

Figure 3.12: Relative positive acceleration of sub-trips composing test routes 1 through 4 in comparison to certification cycles (FTP-75, US06, and NEDC)

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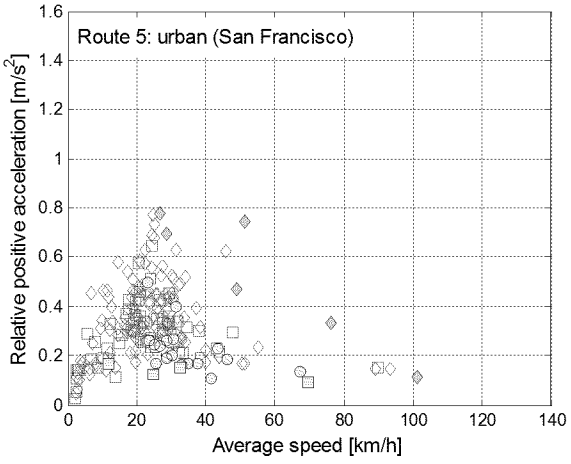

Figure 3.13: Relative positive acceleration of sub-trips composing test Route 5 in comparison to certification cycles (FTP-75, US06, and NEDC)

Interestingly, the relative positive acceleration values for highway driving, Route 1 (top left graph), were not well represented by the US06 certification cycle even though vehicle speed distributions were in good agreement with each other as previously shown in Figure 3.6 and Figure 3.8. There are only a few matching RPA values at the upper end of the vehicle speed range (around 100 km/h). However, it has to be noted that the US06 certification cycle was not developed with the intention to be a representative test cycle but rather to address shortcomings of the FTP-75 cycle in representing high-speed driving and increased acceleration behavior (i.e. aggressive driving) [13, 14], thereby accounting for '*off-cycle*' emissions not reflected in the standard FTP-75 certification cycle [14]. The US06 cycle was adopted by the US-EPA in 1997 as part of the '*Supplemental Federal Test Procedure*' (SFTP) (see Section 2) [13]. The RPA values for the European certification cycle NEDC are well below the majority of RPA values calculated for all five test routes, whereas the US certification cycles (i.e. FTP-75, US06) appear to be more representative of real-world driving for a wide range of vehicle operating conditions for this test program.

3.2.2 Cross-Multi-State Driving Route

Vehicle B was driven over a total distance of 3968 miles between Los Angeles, CA and Seattle, WA in order to characterize after-treatment performance and emissions rates over an extended time of in-use operation. The route, hereinafter referred to as the '*cross-multi-state driving route*' comprises out/inbound Los Angeles to Seattle driving as well as urban/suburban

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vehicle operation in Seattle, WA and Sacramento, CA, and is dominated by a majority of 83.5% highway driving at speeds above 90 km/h. The average vehicle speed over the entire route was ~100 km/h with maximum speeds of up to ~140 km/h. Table 3.6 lists additional characteristics for the cross-multi-state driving route including highway and urban/suburban vehicle operation (i.e. highway, Route 6, and Route 7).

Figure 3.14 shows the topographic maps for the LA to Seattle route on the left following interstate I-5 North as well as the Seattle to LA route on the right. The return route from Seattle to LA included additional urban driving in Seattle, Sacramento and San Francisco (i.e. Route 5). Figure 3.15 and Figure 3.16 depict the topographical maps for the urban/suburban route in Seattle (referred to as '*Route 6*') and urban route in Sacramento (referred to as '*Route 7*'), respectively. Route 6 was driven in the morning, thus included rush-hour traffic from the surrounding residential suburban towns into downtown Seattle. Furthermore, Seattle is located in a hilly costal area, whereas Sacramento lies in the relatively flat San Joaquin valley.

Table 3.6: Overall cross-multi-state route and driving characteristics

Parameters	Value
Route duration [hr]	39.31
Route distance [km]	3968.10
Avg. vehicle speed [km/h]	100.95
Max. vehicle speed [km/h]	120.00
Avg. RPA [1] [m/s^2]	0.23
Characteristic Power [m^2/s^3]	2.63
Min. elevation [m a.s.l. [2]]	1.0
Max. elevation [m a.s.l.]	1320.1
Share [%] (*time based*)	
- idling (≤2 km/h)	3.4
- low speed (>2≤50 km/h)	8.1
- medium speed (>50≤90 km/h)	5.0
- high speed (>90 km/h)	83.5

[1] *RPA - relative positive acceleration*
[2] *a.s.l. - above sea level*

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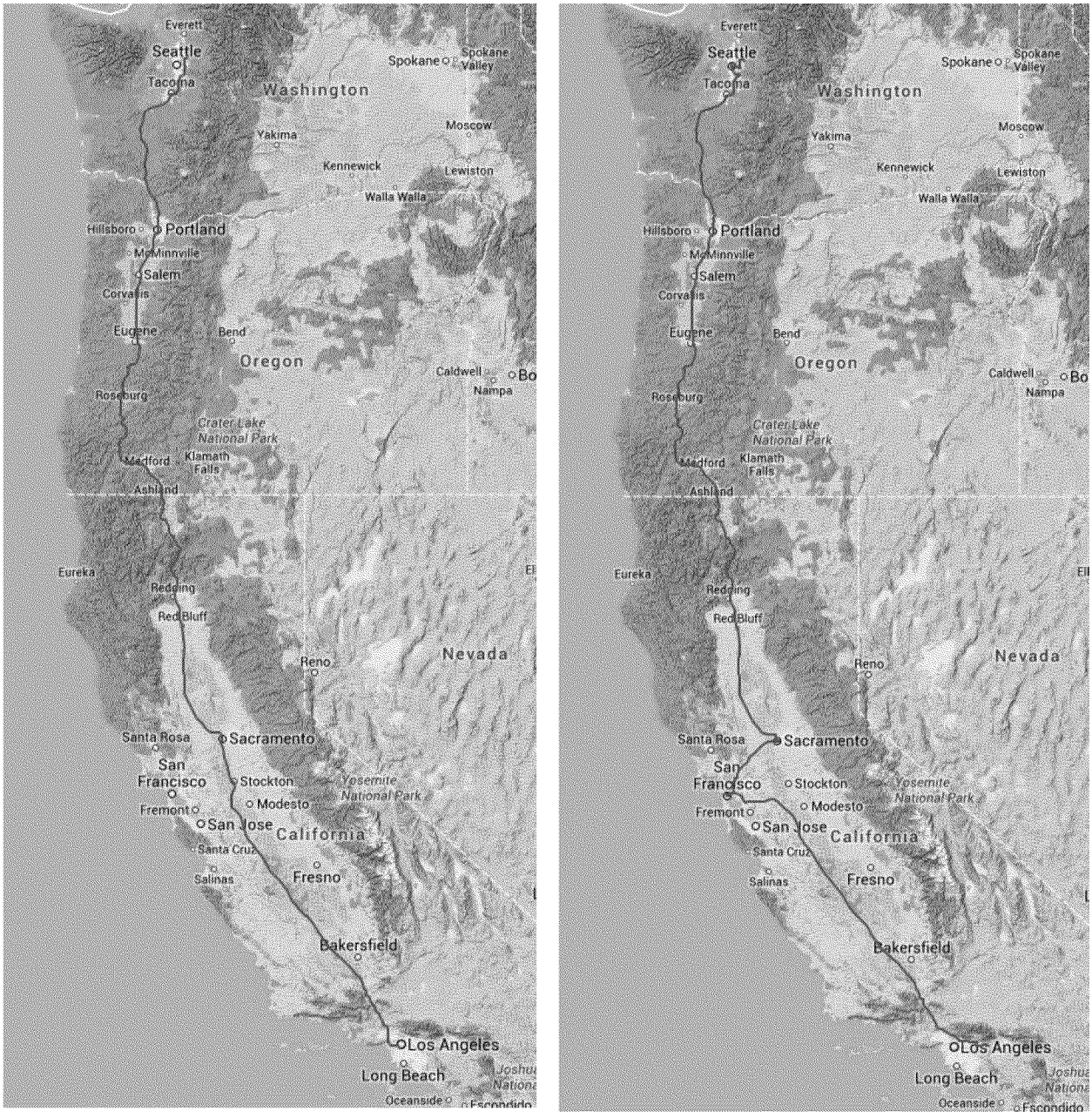

Figure 3.14: Topographic map of *left)* Los Angeles to Seattle, and *right)* Seattle to Los Angeles cross-multi-state driving route

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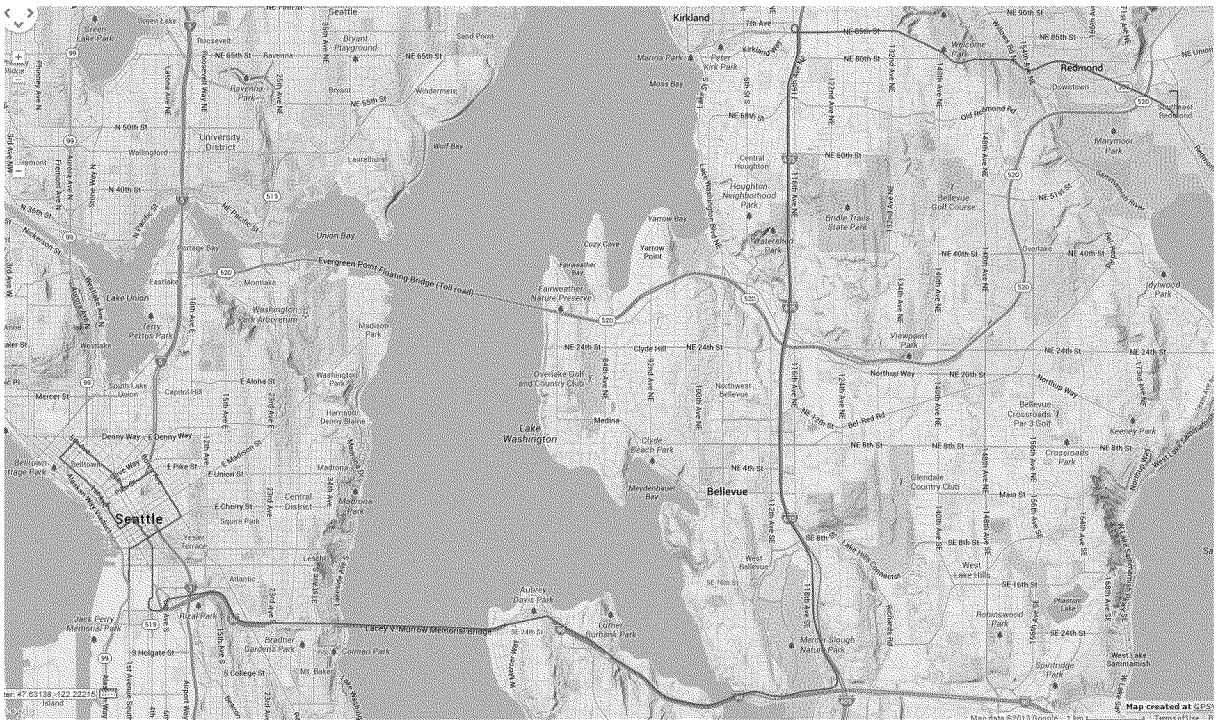

Figure 3.15: Topographic map of Route 6, urban and suburban driving around Seattle, WA

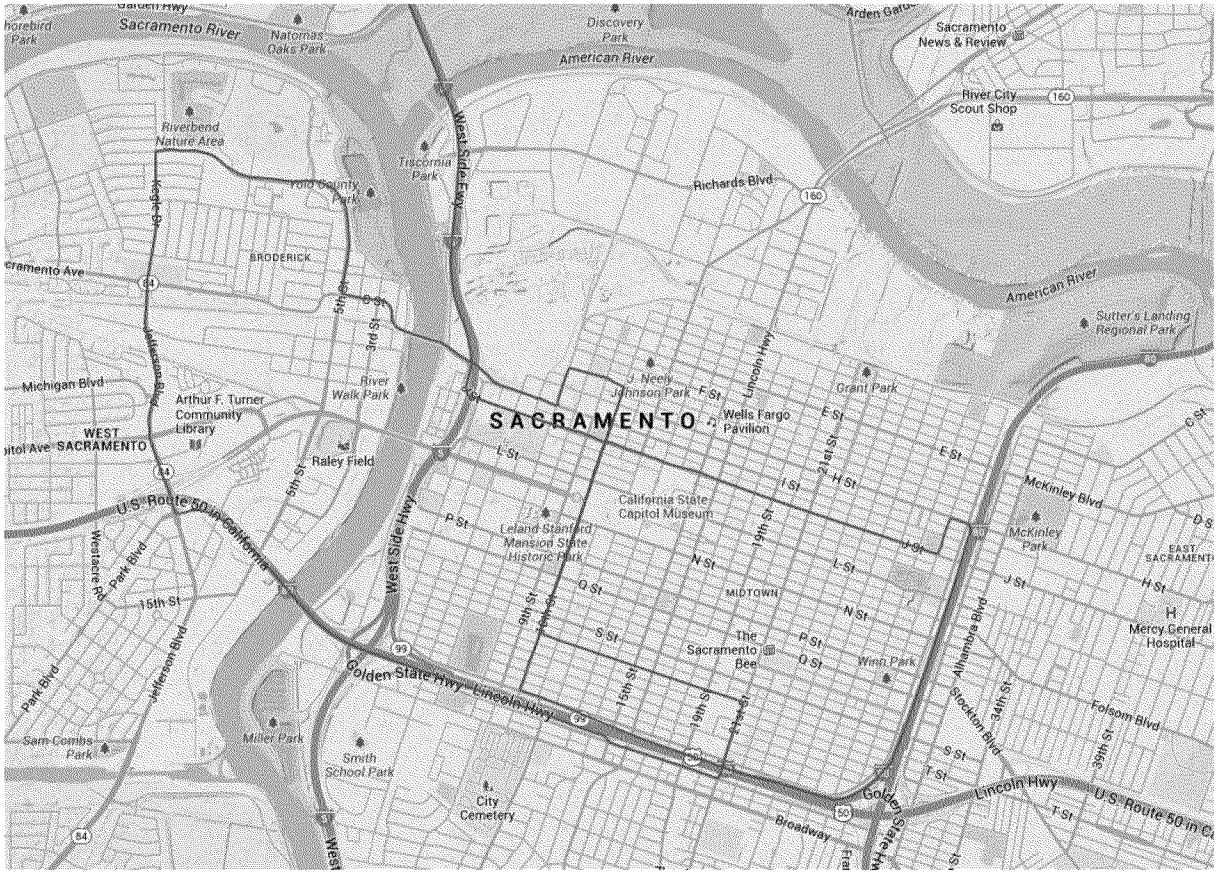

Figure 3.16: Topographic map of Route 7, urban driving downtown Sacramento, CA

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Figure 3.17 b) depicts the vehicle speed distribution for the entire cross-multi state driving route against standard chassis dynamometer test cycles. It can be noticed that even though 85% of the vehicle speeds are in excess of 90 km/h, and thereby significantly exceeding the high-speed (>90 km/h) contribution in the US06 cycle (i.e. 56%), the shape of the two vehicle speed distributions are comparable. The relative positive acceleration for the cross-multi state driving route is plotted in Figure 3.17 a), with urban/suburban driving (i.e. Seattle and Sacramento) contributing to the high RPA values at lower speeds (towards lower left corner), and highway driving predominantly to the low RPA values at high vehicle speeds (towards right corner). Furthermore, comparing RPA values in Figure 3.17 a) with values presented in Figure 3.12 and Figure 3.13 it is possible to identify the individual contributions of urban/suburban as well as high speed highway driving.

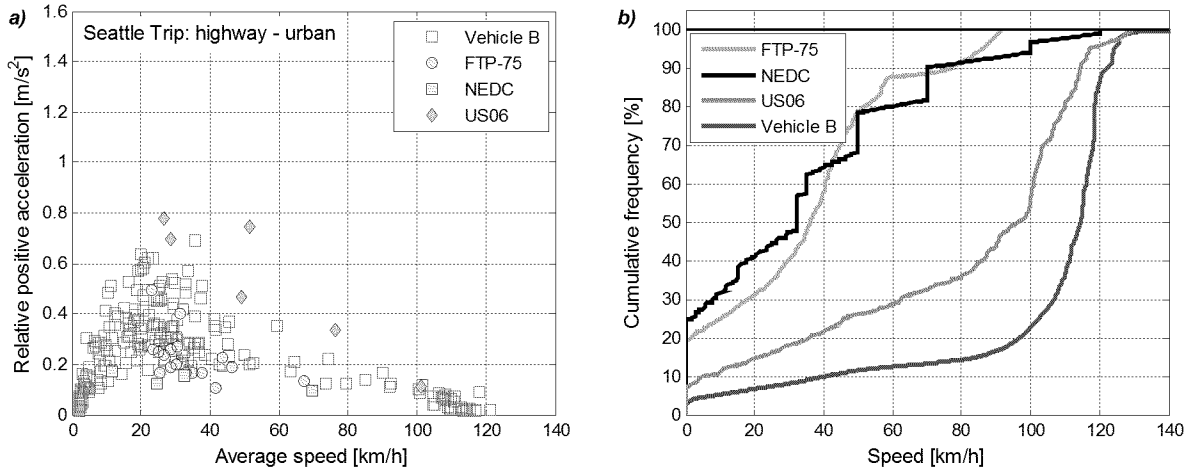

Figure 3.17: *a)* Relative positive acceleration of sub-trips composing cross-multi-state route in comparison to certification cycles (FTP-75, US06, and NEDC); *b)* vehicle speed distributions of cross-multi-state route in comparison to certification test cycles

Figure 3.18 a) and Figure 3.18 b) shows the vehicle speed and altitude, respectively, for the entire cross-multi state driving route as a function of distance traveled. From the altitude graph (see Figure 3.18 b)), one can recognize the symmetry of the driving route predominantly following Interstate I-5 North and South. The reduced vehicle speeds at around 1800km and 3100km into the route mark the urban/suburban driving portions in Seattle, WA and Sacramento, CA, respectively. Furthermore, from the vehicle speed trace one can distinguish portions of the route where the vehicle was driven in cruise control mode (i.e. constant vehicle speeds), from parts where vehicle speed was manually governed by the pedal position of the driver.

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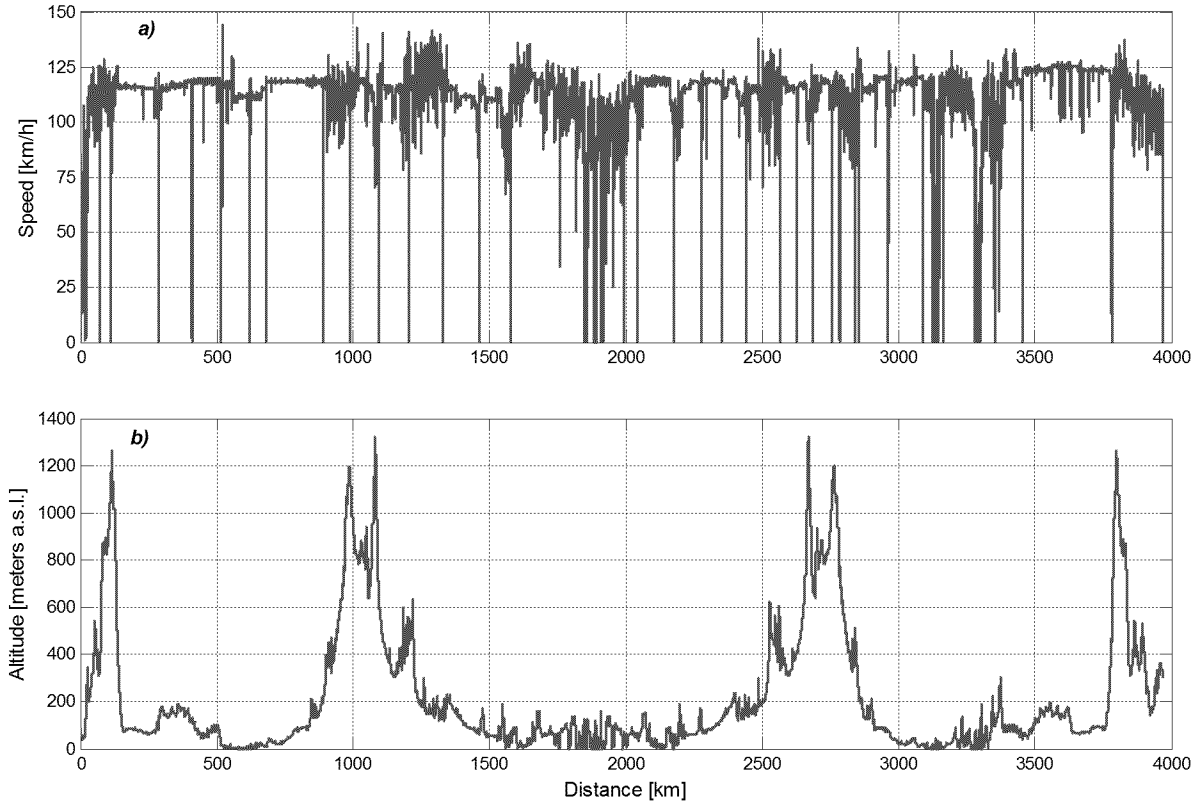

Figure 3.18: *a)* Characteristic vehicle speed and, *b)* altitude profile of cross-multi-state route given in meters above sea level (a.s.l.)

Finally, Table 3.7 lists the individual readiness of the primary instruments and data acquisition components, namely for i) gaseous, ii) particle, and iii) vehicle parameters, that have been utilized to collect data during the cross-multi state driving route. It can be noticed that gaseous and particle matter emissions were collected for ~60% of the entire route, corresponding to approximately 2300km. Instrument operation got primarily limited due to i) cold temperature conditions during late night driving (e.g. sample condensation issues inside analyzer units), and ii) rain fall during portions of the route between Seattle and Sacramento. It has to be noted that instrument readiness was 100% for vehicle testing over the pre-defined test routes (Route 1 to 5).

Table 3.7: Instrumentation readiness during cross-multi state driving route

Instrument	Total time of operation [hr]	Fraction of total trip duration [%]	Total distance of operation [km]	Fraction of total trip distance [%]
OBS (gaseous emissions)	23.6	60.1	2352.0	59.3
ECU (engine parameter)	31.2	79.4	3143.3	79.2
PPS (particle emissions)	22.7	57.8	2304.6	58.1

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Figure 3.1 along with Table 3.8 provide ambient air conditions, including barometric pressure, temperature, and relative humidity encountered during the entire cross-multi-state route as a function of distance traveled. Ambient temperatures ranged from below freezing to ~+30°C with an average temperature of around 13°C as seen from Table 3.8.

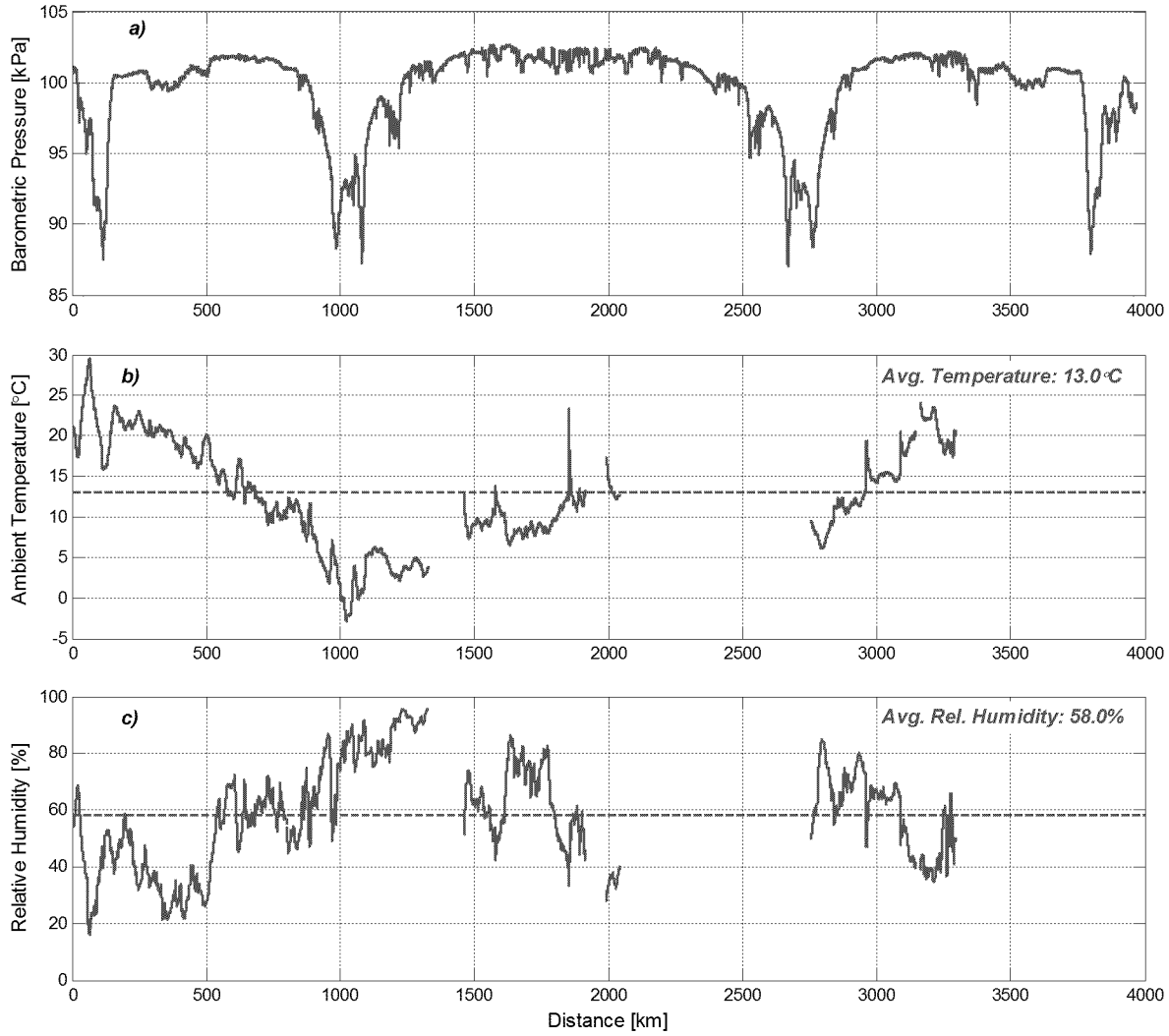

Figure 3.19: a) Barometric pressure, b) ambient temperature, and c) relative humidity experienced during cross-multi-state route as a function of distance traveled (Note: missing data for b) and c) is due to non-operational ambient sensor)

Table 3.8: Range of ambient conditions experienced during cross-multi state route

	Temperature [C]	Baro. Pressure [kPa]	Rel. Humidity [%]
Average	12.97	99.63	57.95
Minimum	-2.87	86.97	15.84
Maximum	29.65	102.43	96.02

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3.3 Emissions Testing Procedure and PEMS Equipment

The emissions sampling setup employed during the course of this study comprised three measurement sub-systems as shown in the schematic in Figure 3.20. Gaseous exhaust emissions were quantified using the on-board measurement system, OBS-2200, from Horiba described in more detail in Section 3.3.1. Real-time particle number concentration measurements were performed using the Pegasor particle sensor (PPS), model PPS-M from Pegasor Ltd. discussed in Section 3.3.2.2, while particle mass measurements were made with the OBS-TRPM system from Horiba as described in Section 3.3.2.1. The Horiba OBS-2200 PEMS system was chosen for this study as it is an approved device under the US EPA heavy-duty in-use emissions compliance program and complies to the EU 582/2011 in-use emissions measurement requirements as well.

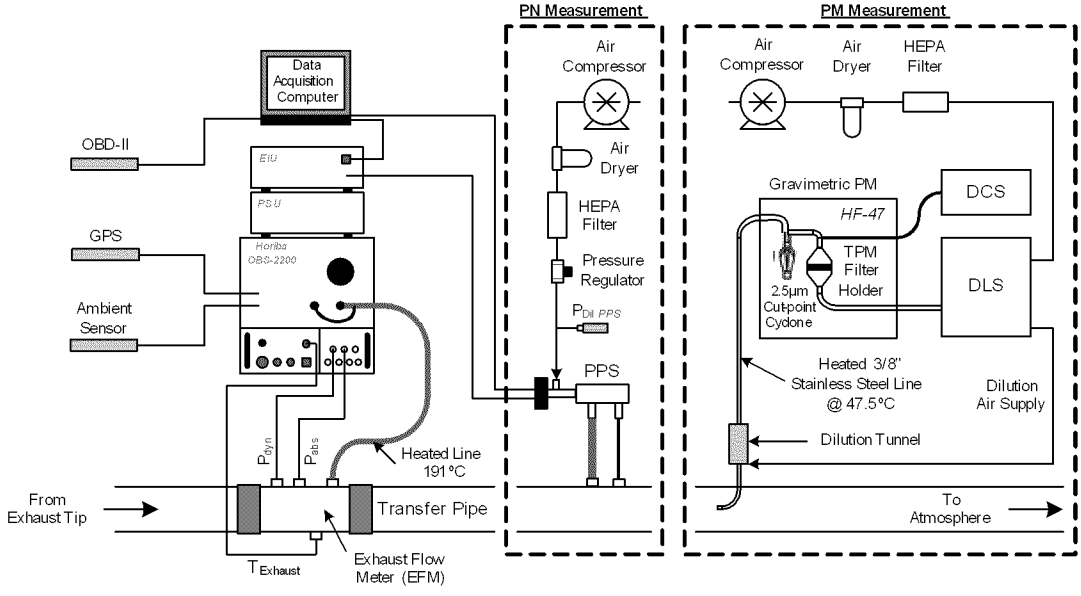

Figure 3.20: Schematic of measurement setup, PN measurement for Vehicles A and B, PM measurement for Vehicle C

Table 3.9 lists all the parameters and emissions constituents collected during on-road testing for this study. Emissions parameters were sampled and stored continuously at 10 Hz frequency, whereas GPS and ECU data were updated at 1 Hz, but stored at the same frequency as emissions data (i.e 10 Hz) by the data acquisition system. An external sensor was used to measure ambient conditions, including temperature, barometric pressure and relative humidity, feeding data directly to the OBS data acquisition software. Vehicle position (i.e. longitude, latitude and altitude) and relative speed were measured by means of a GPS receiver, allowing for subsequent

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calculation of instantaneous vehicle acceleration and distance traveled. An additional high-resolution barometric pressure sensor was used to calculate road grade changes and altitude as an alternative to the GPS signal based on Equation 3 as presented in Section 3.2.1.

Engine specific parameters were recorded from publicly broadcasted ECU signals through the vehicles OBD-II port using a commercially available CAN logging software called AutoTap® from B&B Electronics Manufacturing Company Inc. Logged parameters included engine speed and load, intake air mass flow rate and exhaust temperatures. *Vehicle A* broadcasted DPF outlet temperature, whereas *Vehicle B* broadcasted two exhaust temperatures, namely the DPF inlet and SCR inlet temperatures.

Table 3.9: Overview of measured parameters and respective instruments/analyzers

Category	Parameter	Measurement Technique
Exhaust gas pollutants	THC [ppm]	FID (Horiba OBS-2200)
	CO [%]	NDIR (Horiba OBS-2200)
	CO_2 [%]	NDIR (Horiba OBS-2200)
	NO_x [ppm]	CLD (Horiba OBS-2200)
	H_2O [%]	NDIR (Horiba OBS-2200)
Exhaust flow	Exhaust flow rate [m^3/min]	EFM (Horiba OBS-2200)
	Exhaust temperature [°C]	EFM, K-type thermocouple
	Exhaust absolute pressure [kPa]	EFM (Horiba OBS-2200)
Exhaust PN/PM emissions	PN concentration [#/cm^3]	Pegasor Particle Sensor
	PM (gravimetric) [mg]	Horiba OBS-TRPM
Ambient conditions	Ambient temperature [°C]	Temp. Sensor (OBS-2200)
	Ambient humidity [%]	Humidity Sensor (OBS-2200)
	Barometric pressure [kPa]	Pressure Sensor (OBS-2200)
Vehicle/route characteristics	Vehicle speed [km/h]	GPS
	Vehicle position [°]	GPS
	Vehicle altitude [m a.s.l.]	GPS
	Vehicle acceleration [m/s^2]	Derived from GPS data
	Vehicle distance traveled [km]	Derived from GPS data
Engine characteristics	Engine speed [rpm]	ECU OBD-II
	Engine load [%]	ECU OBD-II
	Engine coolant temperature [°C]	ECU OBD-II
	Engine intake air flow [kg/min]	ECU OBD-II
	Exhaust temperature [°C]	ECU OBD-II

Table 3.10 gives the combination of measurement sub-systems employed for the individual

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test vehicles. Gaseous emissions of CO, CO_2, THC, and NO_x were measured for all three vehicles, whereas particle number concentration measurements via the PPS were only performed for *Vehicles A* and *B* and particle mass quantification via the OBS-TRPM only for *Vehicle C*.

Table 3.10: Emissions constituent measurement matrix

Component	Vehicle A	Vehicle B	Vehicle C
Gaseous emissions	X	X	X
Particle number (*PPS*)	X	X	
Particle mass (*OBS-TRPM*)			X

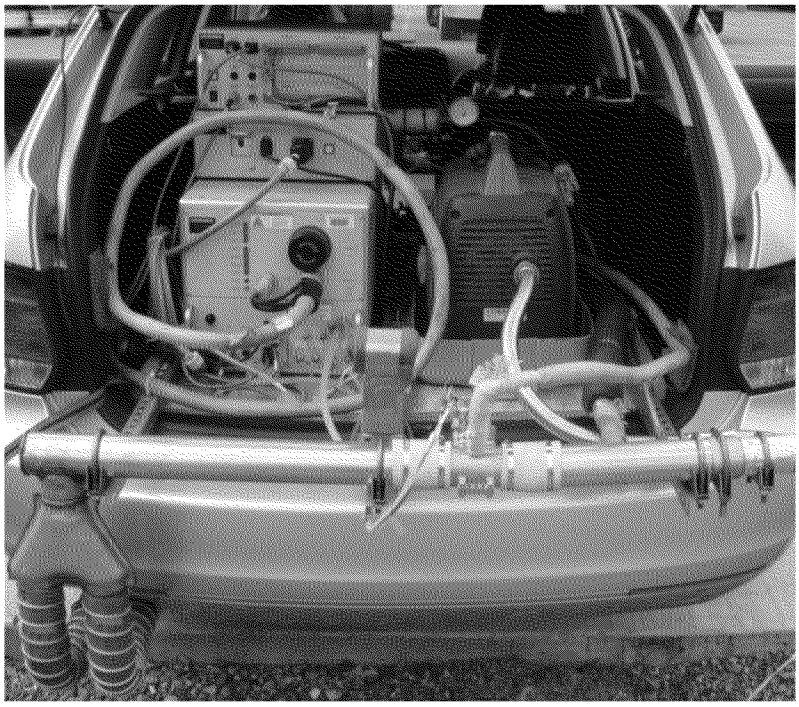

Figure 3.21: Vehicle A instrumentation setup

Figure 3.21 through Figure 3.23 depict the experimental setup and instrument arrangement inside the test vehicles, *Vehicle A*, *B*, and *C*, respectively. For on-road testing with both *Vehicles A* and *B,* a 2kW Honda generator (gasoline fueled) was utilized to supply the necessary electrical power to operate the OBS, PPS and ancillary systems. The power requirements for the OBS-TRPM however, required the addition of a second 2kW Honda generator to support the power demand for the entire sampling setup during testing of *Vehicle C*. Using a vehicle independent power generator had the advantage of not having to draw any current from the test vehicles power system; hence, no additional load was added to the engine which might have skewed the

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emissions production rate and therefore the results of this study. On the other hand, it has to be noted that the addition of measurement equipment was increasing the actual vehicle weight, thereby possibly influencing the engine's load demand and resulting emissions rates. The payload of *Vehicles A* and *B* was representative of four adult passengers totaling 300kg when assuming 75kg per individual passenger (i.e. *Vehicle A*: 305kg, *Vehicle B*: 314kg), whereas *Vehicle C*'s payload had to account for additional 230kg (i.e. 533kg).

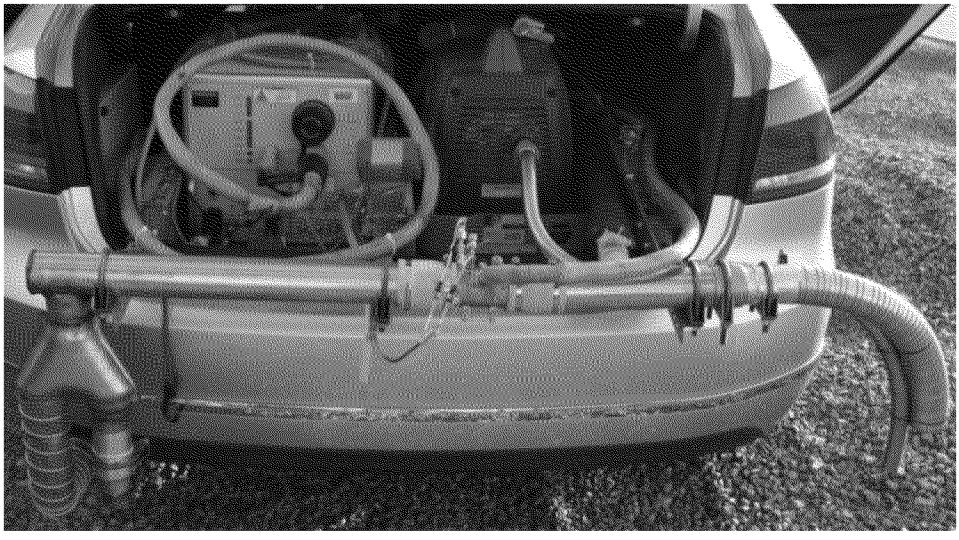

Figure 3.22: Vehicle B instrumentation setup

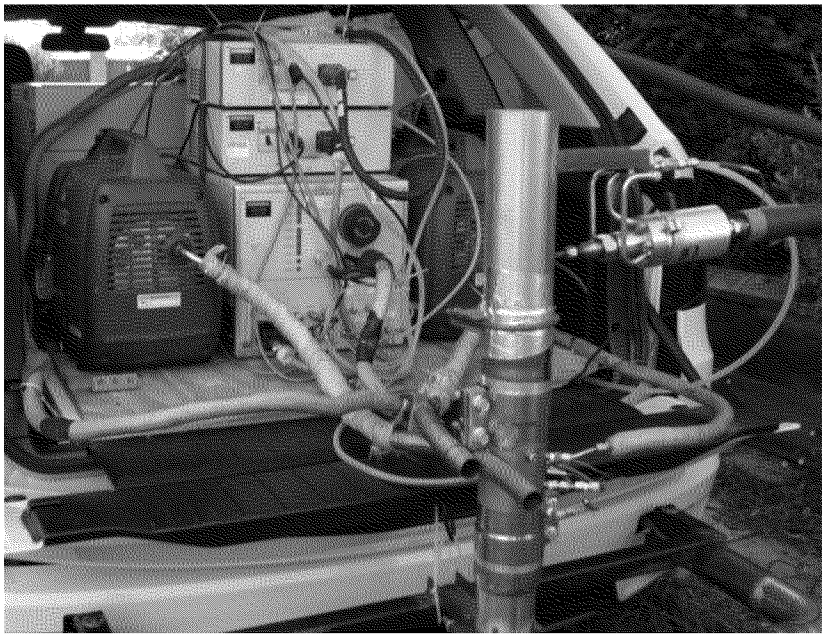

Figure 3.23: Vehicle C instrumentation setup

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3.3.1 Gaseous Emissions Sampling – Horiba OBS-2200

Gaseous raw emissions, including CO, NO_x, THC as well as CO_2 were measured on a continuous basis using the Horiba OBS-2200 on-board emissions measurement system which has been specifically developed with regard to PEMS requirements for on-road vehicle emissions testing according to recommendations outlined in CFR, Title 40, Part 1065. The emissions of CO and CO_2 were measured using a non-dispersive infrared (NDIR) spectrometer (heated wet sample), THC using a flame ionization detector (FID) (heated wet sample), and total NO_x using a chemiluminescence detector (CLD) in conjunction with an NO_2-to-NO converter (heated wet sample). The Horiba OBS system gives the option to either sample in NO_x mode (NO_2-to-NO converter on) or NO mode (NO_2-to-NO converter off), however, for the entire duration of this study the instrument was solely operated in NO_x mode (total NO_x measurement). Detailed information regarding the chosen measurement ranges, span values to which the analyzers were calibrated to, as well as analyzer linearity, accuracy and repeatability of the Horiba OBS-2200 system are given in Table 3.11.

Gaseous emissions were extracted by means of an averaging sample probe through a ½" NPT port installed on the exhaust flow meter adapter that was mounted to the exhaust end pipe. The exhaust sample was directed through a heated line, maintained at a nominal temperature of 191°C using a PID-type controller, to the analyzer inlet port.

Table 3.11: Horiba OBS-2200, Gaseous analyzer specifications [15]

Comp.	Range	Span	Linearity	Accuracy	Repeatability
CO	0.1 vol.%	0.099%	within ±1.0% of full scale	within ±2.5% of full scale	Zero: within ±1.0% of full scale Span: within ±1.0% of readings
CO_2	12 vol.%	11.9%	within ±1.0% of full scale	within ±2.5% of full scale	Zero: within ±1.0% of full scale Span: within ±1.0% of readings
NO_x	1600 ppm	1492ppm	within ±1.0% of full scale	within ±2.5% of full scale	Zero: within ±1.0% of full scale Span: within ±1.0% of readings
THC	350 ppm	303ppm	within ±1.0% of full scale	within ±2.5% of full scale	Zero: within ±1.0% of full scale Span: within ±1.0% of readings

The exhaust flow meter (EFM), used in conjunction with the OBS-2200 instrument is a Pitot-tube type flow meter involving the measurement of dynamic and static pressure heads by means of differential and absolute pressure transducers. The fluid temperature (exhaust gas) is measured

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via a K-type thermocouple allowing to adjust the exhaust gas flow measurement to EPA defined standard conditions (i.e. 293.15K and 101.325 kPa). Additional to pressure and thermocouple ports the EFM adapter features a port for connecting the exhaust gas sampling probe. An averaging type probe with multiple holes spanning the entire EFM adapter's diameter was used to extract continuous exhaust samples. Depending on the vehicle tested two differently sized EFM units were utilized for this study. An EFM adapter with 2" diameter (ID) was installed for testing *Vehicles A* and *B* as shown in Figure 3.24 and Figure 3.25, respectively, whereas a 3.5" diameter EFM was employed during *Vehicle C* testing as depicted in Figure 3.26.

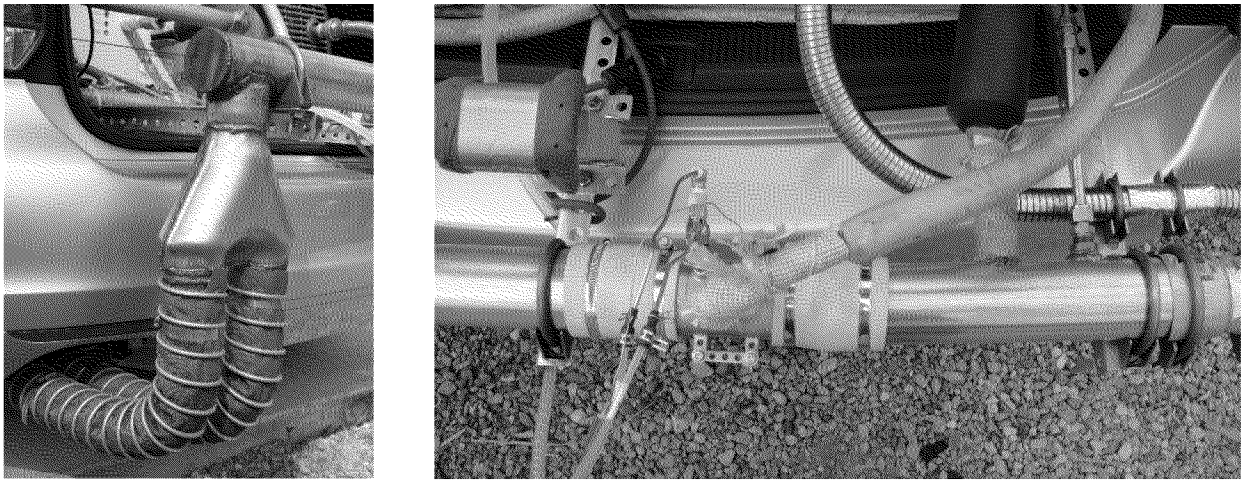

Figure 3.24: Exhaust adapter setup for Vehicle A, *left*: flexible high temperature exhaust hose connecting double vehicle exhaust tip to exhaust transfer pipe, *right*: 2" exhaust flow meter (EFM)

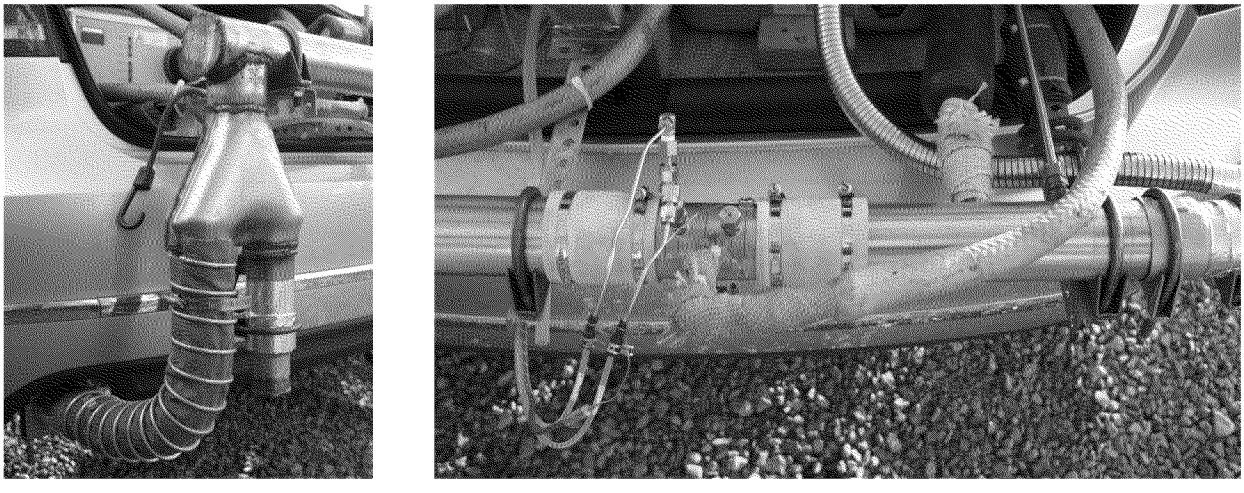

Figure 3.25: Exhaust adapter setup for Vehicle B, *left*: flexible high temperature exhaust hose

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connecting single vehicle exhaust tip to exhaust transfer pipe, *right*: 2" exhaust flow meter (EFM)

Prior to vehicle testing, the exhaust flow meter units were verified against a NIST traceable laminar flow element (LFE) installed on a flow bench at WVU's on-campus laboratory (i.e. EERL). A least-square regression analysis between the LFE and the EFM measurements resulted in a coefficient of determination (R^2) of 0.9986 and 0.9989 for the 2" and 3.5" EFM adapter, respectively.

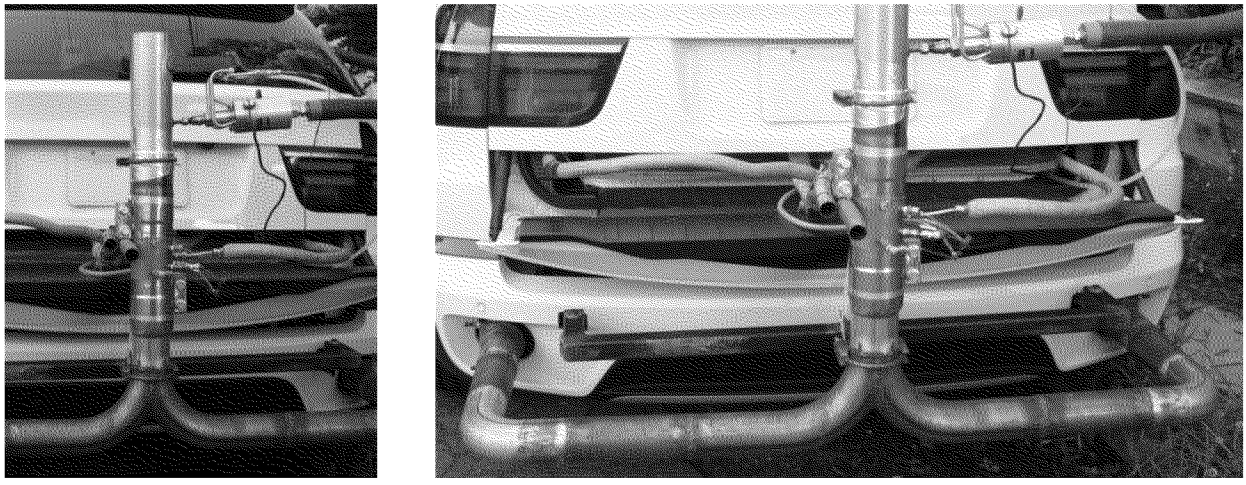

Figure 3.26: Exhaust adapter setup for Vehicle C, *left*: 3.5" exhaust flow meter (EFM), *right*: joining double vehicle exhaust stack into exhaust transfer pipe

3.3.2 PEMS Particle Mass/Number Measurements

PEMS development for PM quantification (PM-PEMS) during on-road operation has been primarily driven by the heavy-duty diesel sector in recent years. Numerous studies were performed within the US [16] and Europe [17, 18, and 19] aimed at evaluating the sensitivity and accuracy of different PM-PEMS, their comparability to the standard engine certification method (i.e. gravimetric sampling via CVS) as well as the feasibility and practicality of their application in a harsh environment such as on-road emissions measurement. Giechaskiel et al. [20] recently performed a comprehensive study comparing commercially available PM-PEMS and PM sensors to the standard gravimetric PM sampling method used for engine certification and type-approval, with regard to particle mass and number concentration measurements during in-use testing. The authors specifically highlighted the advantage of particle number (PN) measurement approaches, due to their possible applicability to future PN emissions standards as will be introduced in the

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EURO VI heavy-duty regulation by 2014. Based on the positive performance of the Horiba OBS-TRPM system during the aforementioned studies [16, 17, 18, 19, and 20] and due to the fact that this system is currently the only commercially available system with approval from the European Union for heavy-duty on-road PM measurement, Horiba's PM-PEMS system was chosen to conduct PM sampling during this study. On the other hand, the Pegasor particle sensor model PPS-M from Pegasor Ltd. was selected for on-line particle number concentration measurements directly from the raw exhaust stream.

3.3.2.1 Gravimetric PM Measurement with Horiba OBS-TRPM

As described earlier Horiba's OBS-TRPM (On-Board System for Transient PM Mass Measurement) system was selected to perform in-use particle mass quantification. This instrument has been specifically developed for the primary purpose of in-use certification of on-road heavy-duty diesel vehicles, as mandated by the US Environmental Protection Agency (US-EPA) [21] and is designed for use in conjunction with Horiba's OBS-2200 gaseous system. The OBS-TRPM is a combination of a proportional diluted sampling system for gravimetric PM sampling on 47mm filter media and real-time measurements of particle length [mm/cm^3] (including soot, sulfates and volatile particles), which can be defined as the product of total number concentration and average particle diameter, by means of a diffusion charging type sensor called Electrical Aerosol Detector (EAD) from TSI Inc. The underlying assumption is that the mass accumulated on the filter is proportional to the PM length parameter as measured by the EAD, therefore, making the OBS-TRPM ultimately capable of calculating a quasi "real-time" PM mass concentration rate. However, the gravimetric sampling component of the OBS-TRPM, requiring physical weighing of the filter media on a microbalance, makes "real-time" PM mass concentration information only available after post-processing of the measured data.

A proportional sample was extracted through a 3/8" stainless steel J-type probe located downstream the OBS exhaust flow meter unit. Proportionality was calculated based on the EFM signal and controlled by a series of fast acting piezo-valves and mass-flow controllers (MFC). Close-coupled to the sampling probe was a dilution unit (i.e. "*dilution tunnel*") that uniformly introduced HEPA filtered dilution air. A ½" heated stainless steel line connected the dilution unit to the temperature controlled filter holder compartment (called "*HF-47*", see Figure 3.27) where the exhaust sample was first directed through a $PM_{2.5}$ cut-point cyclone separator to remove

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particles bigger than 2.5µm (50% efficiency at cut-point), and then through the filter media holder where PM was retained on 47mm Pallflex® Quartz-fiber filter (TX40) membranes (Pall Corporation) for subsequent gravimetric analysis. All components, including, dilution tunnel, transfer line and HF-47 filter box were heated in order to maintain the filter-face temperature at constant 47±5°C. A constant slip stream was extracted from the sample flow before entering the filter media holder and routed to the diffusion-charger (i.e. EAD) for quantification of the particle length parameter. Dilution and sample flows for the entire system were controlled by the flow control unit (called "*DLS*").

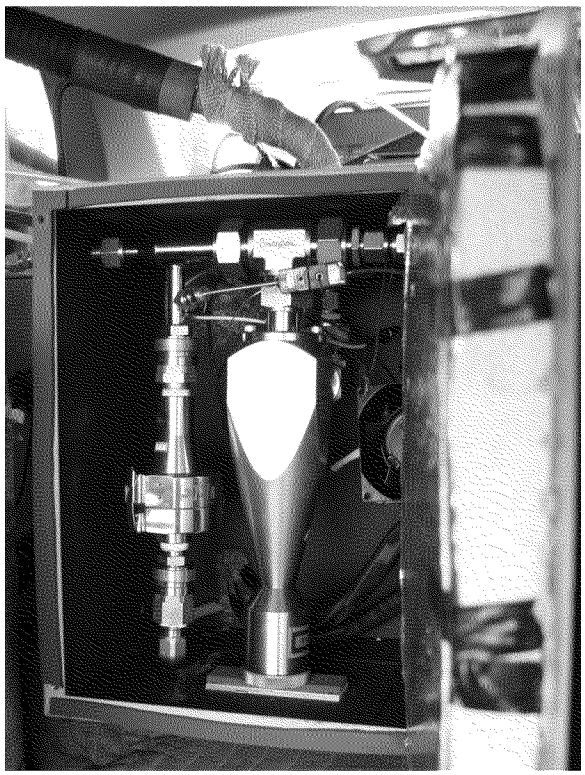

Figure 3.27: Horiba OBS-TRPM heated filter holder box for gravimetric PM quantification, sample is introduced from the top, *left*: 47mm filter holder, *right*: 2.5 cut-point cyclone

All filter media (i.e. TX40 membranes) used during the course of this study were pre and post-weighed at CAFEE's on-campus clean room facility and shipped (overnight) to and back from the vehicle testing location in California. The clean room is environmentally controlled (Class 1000, maintained at 21°C and 50% RH), thus allowing for stable conditions for PM filter media handling, storage and weighting procedures. A Sartorius microbalance with a minimum detection limit of 10 µg and an accuracy of 0.1µg was utilized to pre and post-weigh filter media.

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The measurement system was operated with in-house developed software to calibrate the scale, perform measurements, as well as to monitor the history of individual filter membranes.

3.3.2.2 Real-Time PM Measurement with Pegasor Particle Sensor

Particle number concentration measurements were performed using the Pegasor particle sensor, model PPS-M from Pegasor Ltd. (Finland) [22] which is capable of performing continuous measurements directly in the exhaust stack and providing a real-time signal with a frequency response of up to 100Hz (see Figure 3.28). The sensor operates as diffusion-charging (DC) type device and measures PM based on the current induced by the charged particles leaving the sensor. Figure 3.29 shows the PPS as well as the sample gas flow paths. Dry, HEPA filtered dilution air is supplied at about 22psi and subsequently charged by a unipolar corona discharge charger using a tungsten wire at ~2kV and 5μA. The pressurized dilution air, carrying the unipolar ions, then draws raw exhaust gas through an ejector-type diluter into a mixing chamber, where the ions are turbulently mixed with exhaust aerosol particles for diffusion charging. The sample gas flow is controlled by means of a critical flow orifice and is a function of the supplied dilution air pressure. An electrostatic precipitator (ion trap), installed downstream of the mixing chamber and operating at a moderate voltage of approximately 100V, traps excess ions that escaped the charging zone. Finally, the charge of the out-flowing particles is measured using a built-in electrometer. The measured current signal is amplified and filtered by the internal electronic control unit of the sensor and outputted either as a voltage or current value. The sensors output can be subsequently correlated to other aerosol instruments by means of linear regression in order to measure the concentration of the mass, surface or number of the exhaust particles, depending on the chosen reference instrument.

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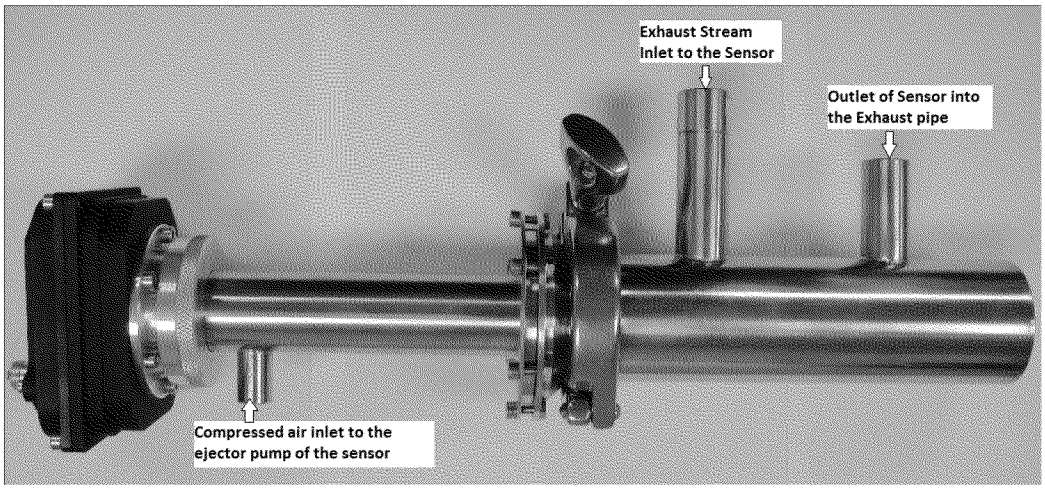

Figure 3.28: Pegasor particle sensor, model PPS-M from Pegasor Ltd. (Finland)

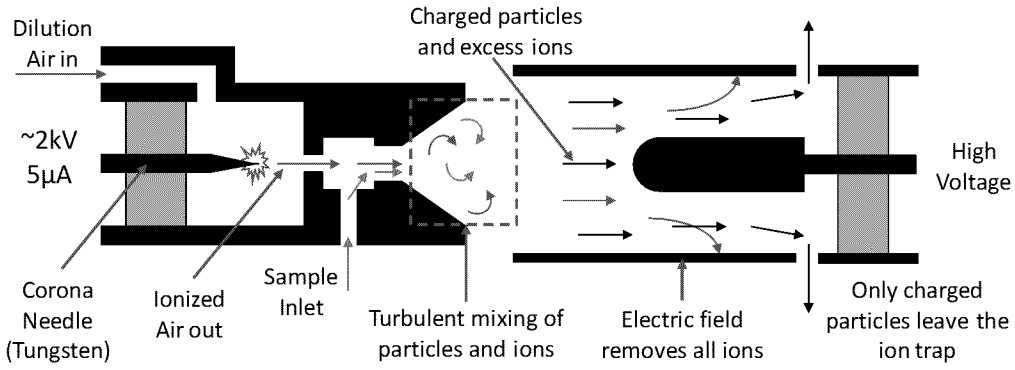

Figure 3.29: PPS measurement principle with sample gas and dilution air flow paths [23, 24]

Extensive testing of this sensor at the engine testing facility at WVU, has shown the capability of this sensor to accurately measure the total PM concentration in comparison to other standard aerosol instruments such as the Ultrafine Condensation Particle Counter (TSI UCPC, Model 3025), the Engine Exhaust Particle Sizer spectrometer (TSI EEPS™, Model 3090) as well as the Micro-Soot Sensor (MSS) from AVL (Model 483) [24]. The sensor was designed as a flow through device and therefore does not involve collection or contact with particles in the exhaust stream, which is especially advantageous for long-term stability and operation without frequent maintenance; hence, best suited for in-use application.

Figure 3.30 shows the positioning of the PPS within the test vehicle. The sensor was enclosed in a compartment (green box seen in Figure 3.30) that provided thermal insulation from the surroundings. Additionally, the sensor was wrapped in insulation material and a resistive heater, in conjunction with a PID controller, maintained the sensor core at a nominal 200°C in

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order to prevent condensation of volatile components within the sensors. A three-foot heated sampling line (maintained at 200°C) was used to transfer the extracted exhaust sample from the exhaust transfer pipe to the PPS inlet, whereas a non-heated, but thermally insulated stainless steel line was used to direct the sample exiting the PPS back to the exhaust transfer pipe.

Pressurized air supply for the PPS was provided by a small electrical air compressor (Blue Hawk, 0.3hp with 2 gallon reservoir). Prior to the sensor inlet, the pressurized air was dried and HEPA filtered as can be seen in the top left corner of Figure 3.30. A manually adjustable pressure control value was used to maintain the dilution air supply pressure at constant 22 psi (~ 1.5bar). As the PPS draws and dilutes the exhaust sample via an ejector type diluter/pump and controls the sample and dilution air flows, and thus, the internal dilution ratio, by means of a critical flow orifice, knowledge of the dilution air pressure is required to calculate particle number concentrations in the exhaust stream. An absolute pressure transducer (Omega, model PX602, range 30psi) was used to continuously measure the dilution air pressure.

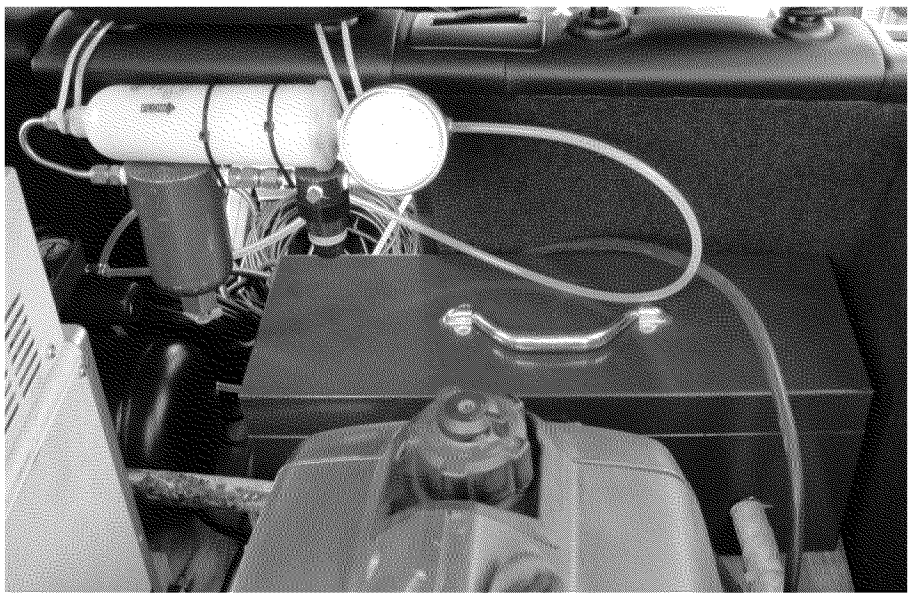

Figure 3.30: PPS setup, the sensor is housed within the green box, *top left*: pressurized, dried and HEPA filtered air supply for PPS

Using the dilution air pressure as input to linear Equation 6 the sample flow rate can be calculated as a function of constant coefficients β_0 and β_1 only. These coefficients depend on the internal configuration (i.e. orifice dimensions) of the PPS and were evaluated as $\beta_0 \approx 3.668$ and $\beta_1 \approx 0.105$ for the sensor used during the course of this study.

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Eq. 6

For the purpose of this study the raw sensor signal was calibrated for both particle number concentration in [#/cm^3] as well as particle mass concentration in [mg/m^3] by means of the linear calibration coefficients developed by Ntziachristos et al. [25, 26], and given by Equations 7 through 10 with constant $C_1 = 3333.33$.

Eq. 7

Eq. 8

Eq. 9

Eq. 10

The particle number concentration measurement setup (i.e. PPS) used in this study was designed and configured to follow the spirit of the Particle Measurement Program (PMP) method as mandated by the European Union [3, 27] for regulatory particle number concentration quantification. The three foot sample transfer line and the PPS sensor itself were heated and maintained at a nominal temperature of 200°C, thereby reducing the probability for volatile and semi-volatile components to condensate and possibly nucleate and form measurement artifacts. Even though the PPS temperature of 200°C is below the recommended temperature for the first stage dilution (150 to 400°C) and evaporation tube (300 to 400°C) it has to be considered that the PMP method is designed to sample from an already diluted, and therefore '*cooled*', sample

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stream from either a constant volume sampling (CVS) or partial dilution system [27] as opposed to the PPS sampling from the raw exhaust at elevated gas temperatures. Particle nucleation phenomena are strongly driven by exhaust gas dilution and cooling which does not occur when the sample is extracted directly from the exhaust stack (or transfer line). As described earlier, the PPS requires a small amount of pressurized dry air to drive the sample flow via an internal ejector diluter, however, the dilution process is assumed to be rapid and without the necessary residence time required to form artifacts before particle charging and measurement occurs. It is therefore believed that the measurement setup used in this study mainly detects solid particles as required by the PMP method.

The electrostatic precipitator (ion trap) installed downstream the mixing chamber of the PPS allows, depending on the voltage applied, not only to remove excess ions but also to trap particle of a certain mobility diameter. Increasing the voltage on the center electrode leads to a stronger electrical field causing particles to deflect and impact inside the PPS, and thereby escape from being counted. This particle removal mechanism can be utilized towards inducing a lower particle cut-point similar to the 50% counting efficiency for particles of 23nm in an ultrafine particle counter as recommended by the PMP method [27].

Based on the above discussion it can be concluded that, even though the PPS method for particle number concentration measurements does not comply with recommendations outlined in the European regulation for PN measurements [3, 27], it follows the spirit of the PMP method of counting '*only solid particles of size larger than 23nm*' (and smaller than 2.5µm). Tikkanen *et al.* [28] found good agreement between a PPS measuring directly from the exhaust stack and a second PPS, equipped with a catalytic stripper (CS) to remove volatile and semi-volatile particles, sampling from the diluted exhaust gas in a CVS system for both light and heavy-duty engines. Finally, it has to be emphasized again that the PPS does not directly measure particle number concentrations but rather infers PN counts from a charge measurement as opposed to the ultrafine particle counters required by the PMP method [27] that are based on optical counting of individual particles after they were allowed to grow to a detectable size in a saturated Butanol or water environment.

Therefore, the reader is cautioned when directly comparing the particle number concentration results presented in this report (see Results and Discussion, Section 4) with

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European PN limits (i.e. Euro 5b/b+ [4]) for light-duty diesel vehicles as the measurement method used during this study differs from the measurement protocol set forth by the European Union [3, 27]. An additional and more detailed discussion about the PMP method required for PN measurements according to the European regulation is given in Appendix 7.2.

3.3.3 PEMS Verification and Pre-test Checks

3.3.3.1 PEMS Verification and Analyzer Checks

All PEMS instruments employed during the course of this study were calibrated, verified and operated according to manufacturer's recommendations and requirements outlined in CFR, Title 40, Part 1065, Subparts D and J [29]. Individual analyzers of the OBS system were calibrated and verified prior to deployment of the instrument to the field at WVU's on-campus laboratory. The following discussion will briefly outline the verification and system checks performed on the OBS-2200 instrument.

As recommended by the manufacturer, "*amplifier zero*" and "*detector gain*" adjustments for flame ionization detector and chemiluminescence detector, and "*amplifier gain*" adjustments for the FID were performed prior to analyzer linearization as these adjustments affect the sensitivity of the FID and CLD analyzers. Following this, analyzer "*linearity*" verifications were performed for each individual analyzer (i.e. CO, CO_2, THC, and NO_x) by flooding the instruments inlet port with a calibration gas mixture, blended at 10 different ratios equally spaced across the selected measurement range for a given analyzer. A least-squares regression analysis was subsequently performed between the analyzer's response and the theoretical calibration gas blend concentrations and verified to comply with linearization criterions as per 40 CFR §1065.307.

After "*linearity*" verifications a set of interference checks was performed in order to quantify the amount of interference between the component being measured and any other components that are known to interfere with its measurement and that are ordinarily present in the exhaust gas sample. These include, CO_2 and water (H_2O) quench checks on NO_x, CO_2, propane (C_3H_8), and H_2O interference checks on CO, oxygen (O_2) interference check on THC, as well as CO, C_3H_8, and H_2O interference checks on CO_2. The Horiba OBS-2200 system automated these procedures to help guide the operator through the respective processes with a routine that compares interference results against pre-determined limits based on 40 CFR 1065

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Subpart D and J. Additionally, NO_x converter efficiency and THC hang-up checks were performed to ensure proper analyzer response.

The heated sample lines for gaseous (OBS-2200) and PM (OBS-TRPM) samples were checked for any leaks, and for proper control of the heated surfaces. Leak checks were performed via a vacuum-side leak verification (40 CFR §1065.345), using a pressure calibration device, and temperature traces were established with a thermocouple and thermocouple calibrator.

The OBS-TRPM system was verified according to manufacturer recommendations, involving various leak checks and sample flow checks using calibrated reference mass flow meters.

3.3.3.2 PEMS Installation and Testing

After initial installation of the PEMS on the test vehicle and prior to start of each test day, the PEMS was warmed-up and allowed to thermally stabilize for at least one hour. After warm-up and prior to start of each test route "*zero*" and "*span*" checks and adjustments were performed for each analyzer, followed by an automated internal system check.

Prior to start of testing, the PEMS equipment was validated by placing all systems in sample mode with the test vehicle's engine turned on and set to idle operation. During this time, each measurement was checked for consistency, using good engineering judgment.

"Zero" and "span" checks and adjustments were performed before and immediately after completion of each test route and analyzer drift values were automatically recorded by the OBS software for subsequent drift correction of measurement results.

3.3.3.3 PEMS Comparison with CVS System

One out of the three test vehicles, specifically the *Vehicle B*, was selected for a cross-correlation evaluation between the OBS-2200 PEMS and laboratory grade instruments while the vehicle was operated over standardized test cycles on a chassis dynamometer at CARB's light-duty constant volume sampling (CVS) test facility in El Monte (CA). This allowed to establish confidence in the measurement results of the PEMS, as well as to identify possible issues with the on-road measurement setup.

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The same 2" diameter (ID) EFM adapter as used during on-road testing of *Vehicles A* and *B* (see Figure 3.24 and Figure 3.25) was installed into the exhaust transfer line leading from the vehicles exhaust tip to the CVS tunnel as shown in Figure 3.31 (see right side of figure). The OBS-2200 PEMS was setup and configured in the same manner as it was used during on-road testing, measuring raw exhaust gas concentrations of CO_2, NO_x, CO, and THC, volumetric exhaust flow, and ambient air conditions inside the test cell. Also, the Pegasor particle sensor was installed downstream the EFM using the same sample extraction configuration as during on-road testing. Upstream of the OBS-2200 sampling location, CARB personnel installed a Semtech-DS PEMS unit from Sensors Inc. along with an exhaust flow meter allowing for additional cross-correlation of between two different PEMS instruments. Furthermore, an AVL SESAM FTIR multi-component measurement system sampling raw exhaust gas as well as an AVL Particle Counter (APC) and an Engine Exhaust Particle Sizer (EEPS®) spectrometer (model 3090) from TSI Inc. quantifying particle number concentrations and size distributions from diluted exhaust (CVS) were being operated during chassis dynamometer testing of *Vehicle B*.

However, this report will only present and discuss cross-correlation analysis performed between regulated exhaust gas constituents measured with the OBS-2200 PEMS and the CVS system, including CO_2, NO_x, CO, and THC.

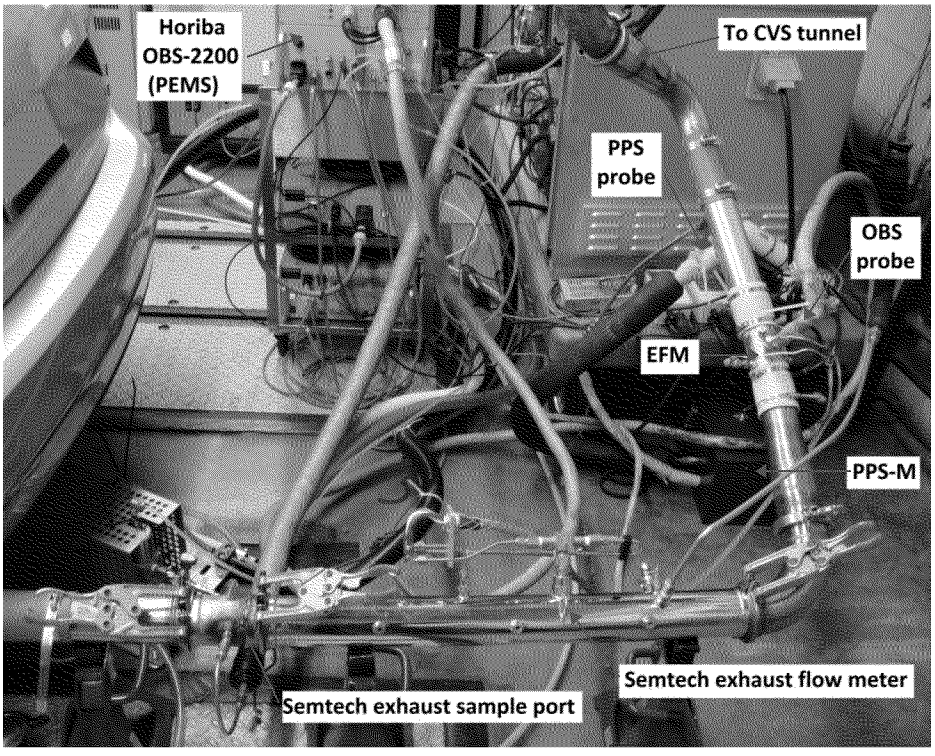

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Figure 3.31: Experimental setup and exhaust sample extraction during chassis dynamometer testing of Vehicle B at CARB's El Monte, CA, vehicle test facility

Experiments were performed over three certification test cycles, namely the FTP-75, US06, and the European NEDC using the same test fuel as has been used during the on-road emissions testing (see Appendix 7.3 for fuel specifications). Figure 3.32 depicts the continuous emissions mass rates of both PEMS and CVS system in [g/s] over the three bags of the FTP-75 cycle, where '*Bag 1*' is a cold start and transient phase, '*Bag 2*' the stabilized phase followed by a 10min hot soak, and finally '*Bag 3*' a hot start and transient phase (same vehicle speed as '*Bag1*').

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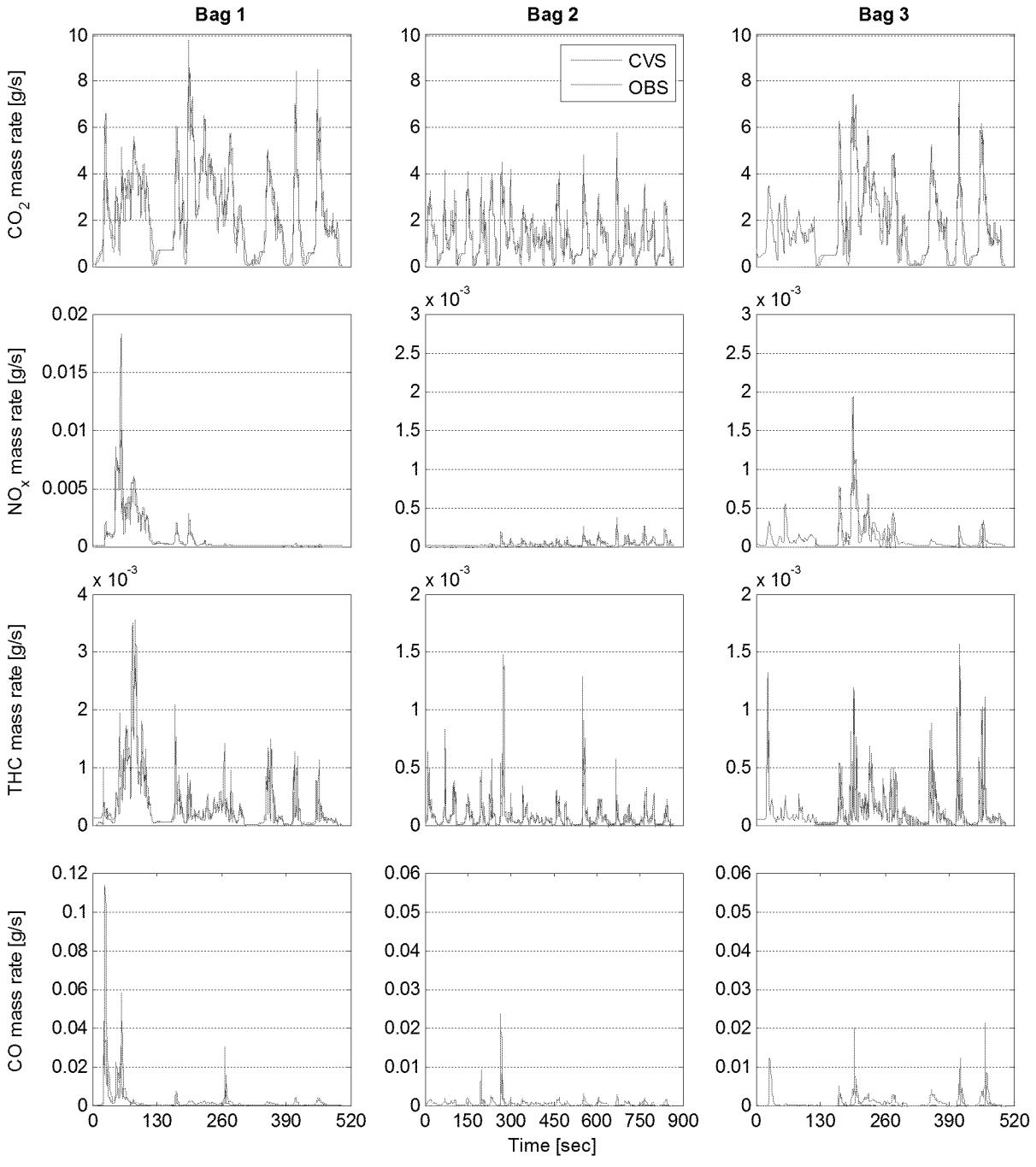

Figure 3.32: Emissions rate comparison between CVS laboratory (CARB, El Monte CA) and Horiba OBS-2200 PEMS measurements over the FTP-75 standard chassis dynamometer test cycle

In parallel, Figure 3.33 shows results from a linear regression analysis between emissions rates measured by the CVS system and PEMS with the CVS system being considered the reference method. It has to be noted that for '*Bag 3*' data collection with the PEMS only started after 130 seconds, as visible from the graphs in Figure 3.32. Therefore, data points for the first

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130 seconds of '*Bag 3*' were not considered for the linear regression analysis presented in Figure 3.33.

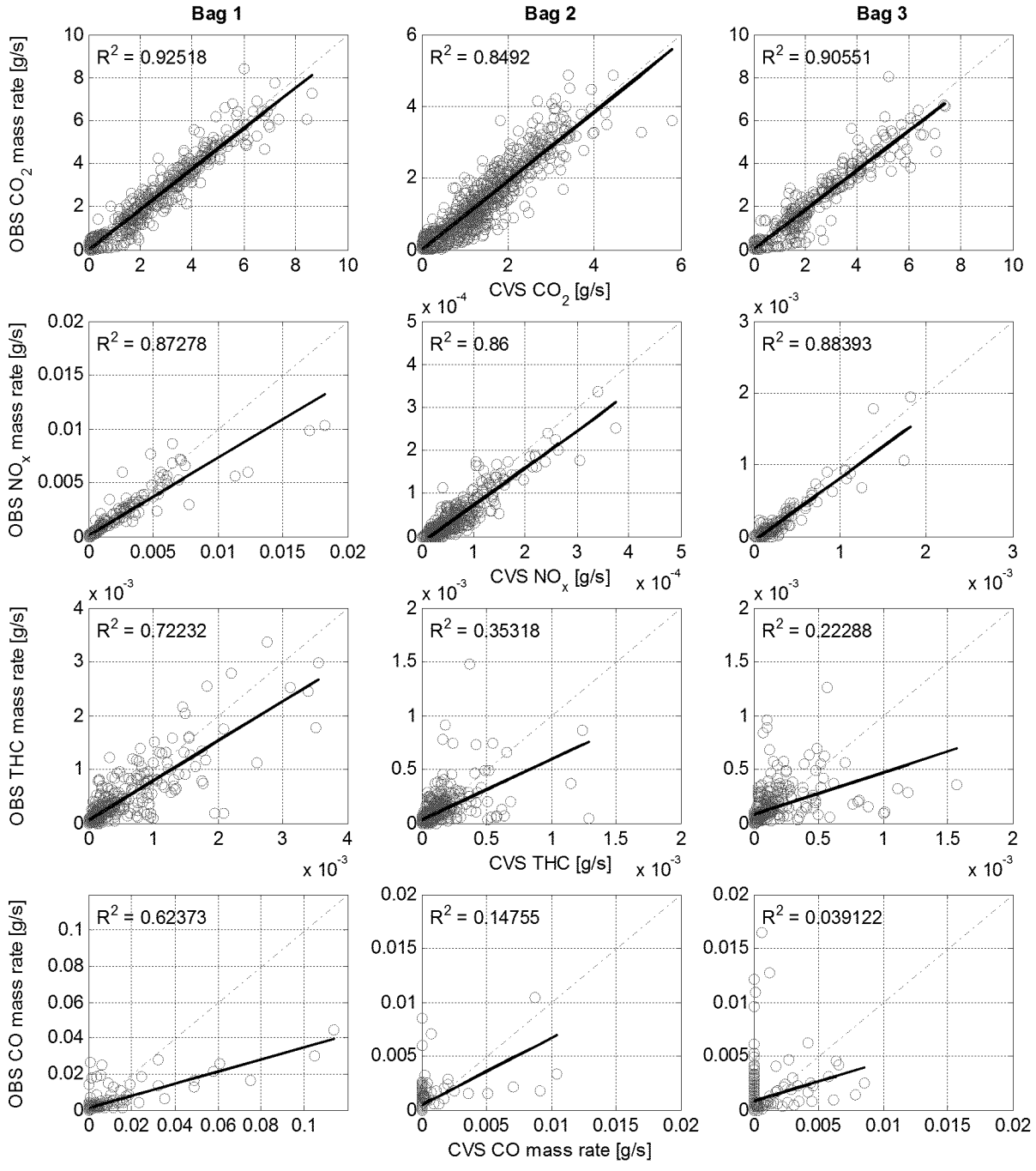

Figure 3.33: Linear regression analysis between CVS laboratory (CARB, El Monte CA) and Horiba OBS-2200 PEMS measurements over the FTP-75 standard chassis dynamometer test cycle

As can be seen from Figure 3.33, the PEMS shows fairly good overall correlation with the

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CVS for CO_2 and NO_x over all three bags of the FTP-75. For NO_x emissions, the PEMS fails to adequately capture the full magnitude of some of the emissions spikes during acceleration events (see, e.g., how the largest NO_x spike in figure 3.32 [*'Bag 1'*] is larger for the CVS). However, one has to keep the low concentrations in mind when interpreting the data, especially with '*Bag 2*' and '*Bag 3*' NO_x emissions being up to two orders of magnitude lower than for '*Bag 1*'. The latter is primarily due to the SCR system becoming effective in reducing NO_x only after achieving a certain threshold temperature, while not being active during cold-start conditions.

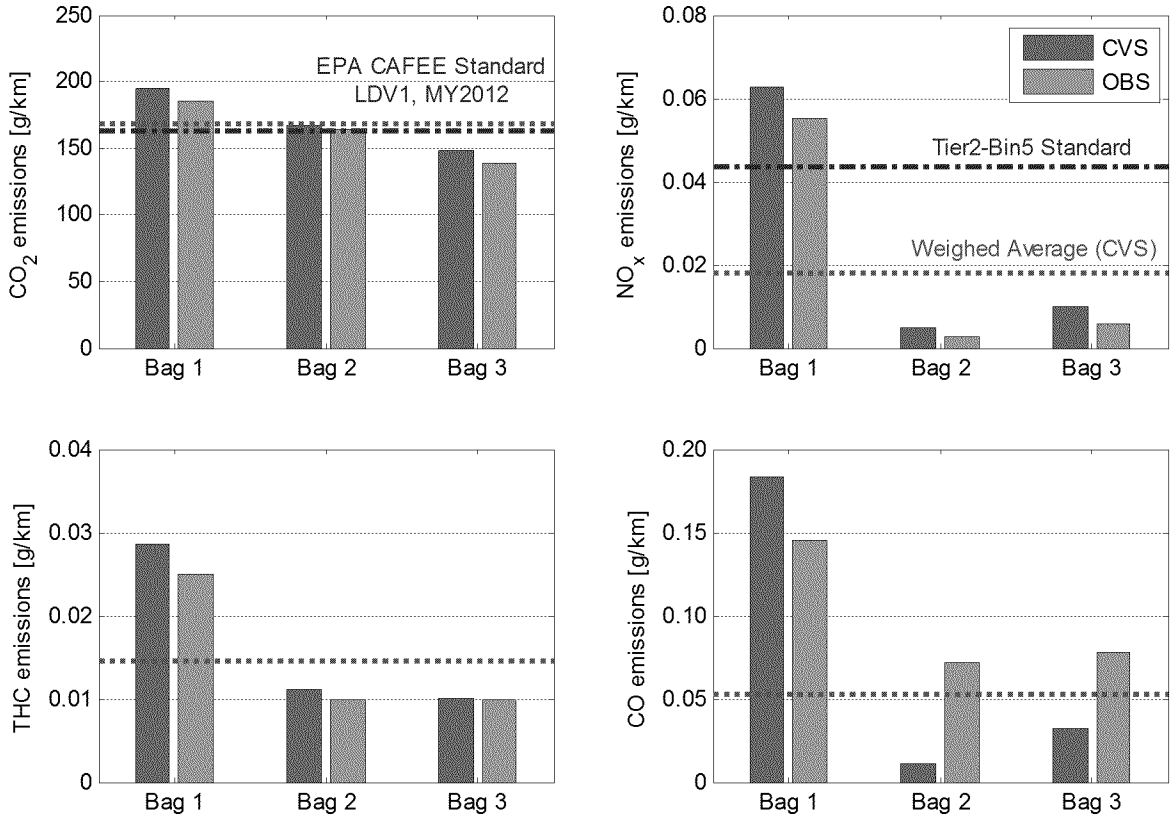

Figure 3.34: Comparison of integrated emissions rates between CVS laboratory (CARB, El Monte, CA) and Horiba OBS-2200 PEMS for bags 1 through 3 of the FTP-75 standard chassis dynamometer test cycle. Note: red dotted lines represent the weighted emission rates as reported from the CVS laboratory; green dotted lines are US-EPA Tier2-Bin5 standards (@ full useful life)

Total hydrocarbons and CO both exhibit low emissions rates, as is typical for diesel combustion engines, thus, regression analysis between the two measurement methods shows reduced correlation on an instantaneous basis. Especially CO emissions were observed to be near zero as measured by the CVS system once the after-treatment system was warmed up, while the

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PEMS captured occasional emissions spikes during acceleration events. The poor correlation for CO and THC may also be due to the comparably high response times of the portable CLD and FID analyzer cells.

Regardless of the instantaneous correlation of the signals (which may also be affected by the variable travel times of exhaust gas within the measurement setup before it reaches the analyzers at the diluted point), it is important to point out that the PEMS follows overall mass emissions with good accuracy for all pollutants. This is shown in Figure 3.34, which depicts the distance-specific emissions in [g/km] of regulated emissions as measured by the PEMS and CVS system over the three bags of the FTP-75 chassis dynamometer test cycle. The integrated values for all three bags do correlate to within ~6% for CO_2, ~10% for NO_x, ~10% for THC and ~30% for CO. The dotted red lines indicate the weighted average emissions factors calculated from the CVS results, whereas the dotted green lines represent the US-EPA Tier 2-Bin 5 standards for NO_x, CO, and THC, and the LDV CAFE standard for CO_2, respectively (see Figure 3.34). A significant reduction in emissions factors for criteria pollutants can be noticed between '*Bag 1*' versus '*Bag 2 & 3*' which is attributed to the change in conversion efficiencies as the after-treatment system is being warmed up after the cold-start. It takes approximately 2 minutes to warm-up the after-treatment system as can be concluded from the drastic drop in emissions rates in Figure 3.32. NO_x, CO, and THC emissions are reduced by 92%, 61% and 94%, respectively, between '*Bag 1*' (cold start) and '*Bag 2*' (stabilized phase). Table 3.12 lists the weighted emissions factors for the criteria pollutants and CO_2 as calculated from CVS system and PEMS measurements along with the US-EPA Tier2-Bin 5 (at full useful life). It can be noticed that weighted NO_x emissions are approximately 60% below the applicable standard. Note that although the CO difference between the CVS and PEMS is large, these measurements are two orders of magnitude lower than the Tier2-Bin5 regulatory limit.

Table 3.12: Weighted emissions factors over FTP-75 test cycle measured by CVS system and PEMS vs. US-EPA Tier2-Bin5 standard (at full useful life); along with relative differences

Category	CO_2 [1)] [g/km]	NO_x [g/km]	THC [2)] [g/km]	CO [g/km]
Tier2-Bin5	-	0.043	0.056	2.610
Weighted CVS	167.69	0.018	0.014	0.053
Weighted PEMS	161.59	0.015	0.013	0.089

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Difference	[%]	[%]	[%]	[%]
Tier2-Bin5 vs. CVS	-	58.0	74.1	98.0
Tier2-Bin5 vs. PEMS	-	65.9	76.5	96.6
CVS vs. PEMS	3.6	18.8	9.4	-69.8

[1] *CO_2 is not regulated under Tier 2 standards.*
[2] *NMOG standards taken for THC limit*

Similarly, Figure 3.35 depicts the emissions factors for the criteria pollutants and CO_2 over the two bags of the NEDC, where '*Bag 1*' refers to urban driving including cold-start during the first portion and '*Bag 2*' to high-speed highway driving conditions during the second portion of the cycle. The significant reduction in NO_x, CO, and THC emissions of 65%, 99%, and 95% between '*Bag 1*' and '*Bag 2*' is attributed to the fully warmed up after-treatment system during the second portion of the test cycle, thus, leading to improved emissions conversion efficiencies.

Additionally, Figure 3.35 shows a 40% reduction in CO_2 emissions factor between urban and highway driving conditions that translates into an approximately 67% improvement in fuel economy from ~28mpg to ~48mpg, respectively.

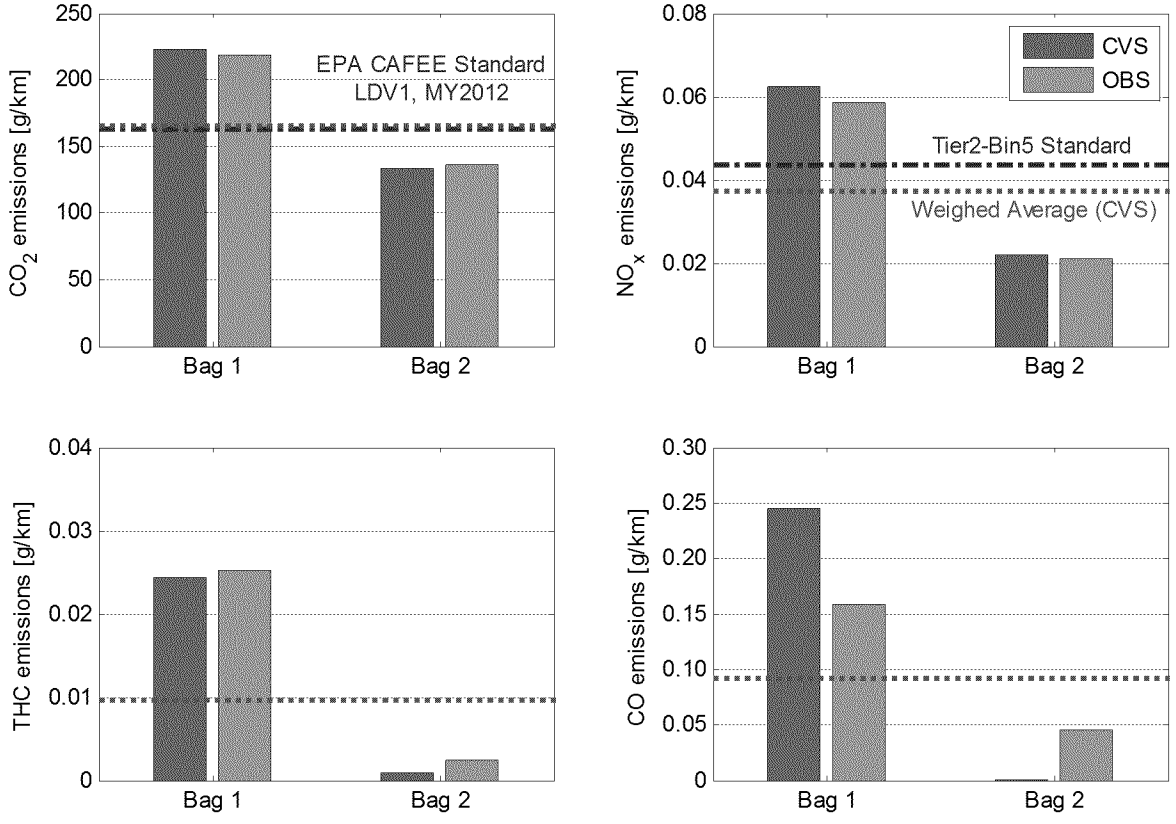

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Figure 3.35: Comparison of integrated emissions rates between CVS laboratory (CARB, El Monte, CA) and Horiba OBS-2200 PEMS over the NEDC standard chassis dynamometer test cycle

Table 3.13 summarizes the emissions factors over the NEDC for both CVS system and PEMS along with the relative differences. As seen in this table, there is good correlation between the CVS and PEMS unit for CO_2 and NO_x while a relatively large variation in THC and CO was observed. The relative error in the THC and CO emissions should be kept in perspective with the relatively low levels as compared to the regulatory emissions limits.

Table 3.13: Emissions factors over NEDC as measured by CVS system and PEMS

Category	CO_2 [g/km]	NO_x [g/km]	THC [g/km]	CO [g/km]
CVS '*Bag 1*'	222.28	0.063	0.024	0.246
CVS '*Bag 2*'	133.09	0.022	0.001	0.001
PEMS '*Bag 1*'	218.42	0.059	0.025	0.159
PEMS '*Bag 2*'	136.73	0.021	0.003	0.045
Total CVS	166.10	0.037	0.010	0.092
Total PEMS	166.96	0.035	0.011	0.087
Difference	**[%]**	**[%]**	**[%]**	**[%]**
CVS vs. PEMS '*Bag 1*'	1.7	6.1	-3.5	35.2
CVS vs. PEMS '*Bag 2*'	-2.7	4.2	-151.6	-3688.8
CVS vs. PEMS '*Total*'	-0.5	5.4	-13.1	5.0

3.4 Vehicle Test Matrix

The test matrix followed during this study is given in Table 3.14. *Vehicle A* was tested over routes 1 through 4, performing two repeats of each route. *Vehicle B* was tested over routes 1 through 5, and additionally over a total distance of ~3968 km between Los Angeles, CA and Seattle, WA. Testing of *Vehicle C* involved driving over routes 1 through 3 as well as route 5. Test routes that were repeated twice were driven with alternating drivers in order to make emissions results independent from a specific driver, hence, driving style. All test routes (i.e. Route 1 through 5) for all three vehicles were performed with the engine and aftertreatment system in warmed-up condition.

Table 3.14: Vehicle test matrix

Route	Vehicle A	Vehicle B	Vehicle C

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Route 1: highway	2	2	1
Route 2: urban (Los Angeles)	2	2	2
Route 3: rural - uphill/downhill	2	2	3
Route 4: urban (San Diego)	2	2	
Route 5: urban (San Francisco)		1	2
Cross-State Trip CA to WA		X	

3.5 Data Analysis and Emissions Calculations

All data analysis and data quality assurance as well as emissions calculations presented herein are following recommendations outline in CFR, Title 40, Subpart 1065 D, G, and J [29] as well as WVU CAFEE internal and publicly available standard operating procedures (SOP). Drift correction for measured exhaust concentrations, emissions mass rates and distance or work-specific emissions factors are calculated according to CFR, Title 40, Subpart G [29], while moving averaging window method (AWM) calculations follow Annex B of the European draft on PEMS measurement for light-duty vehicles as well as guidelines prescribed in the European Regulations No. 582/2011 for in-use emissions from heavy-duty vehicles [3]. The integrated emissions results and averaging window emissions factors presented in this report are based on total emissions emitted over a given test route and are not corrected for any exclusion conditions such as exhaust temperature limits, altitude, DPF regeneration events or similar. Also, all averaging windows were considered for calculation and none were invalidated based on the 20% minimum power condition as outlined in the European Regulations No. 582/2011 [3]. Additional information about specific emissions calculating procedures applied to data presented in this report is given in Appendix 7.1.

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4 RESULTS AND DISCUSSION

The results chapter will discuss the average on-road emissions for the criteria pollutants and CO_2 from all three test vehicles in Section 4.1 for the pre-defined test routes (see Section 4.1.1) as well as the cross-multi state driving route (see Section 4.1.2), followed by an in depth analysis of the NO_x emissions using the averaging window method in Section 4.2. Finally, individual results for particle number concentrations and PM mass will be presented and discussed in Section 4.3 of this chapter.

This report is presenting gaseous emissions mass rates in [g/s] and emissions factors in [g/km], while particle number and mass concentrations are reported in [#/cm^3] and [mg/m^3], respectively, and particle number and mass emissions factors in [#/km] and [mg/km], respectively. Along with distance-specific emissions, dimensionless deviation ratios (DR) are reported for each emissions constituent as a measure of how much the actual on-road emissions are deviating from the regulatory limit. The calculation of deviation ratios is given by Equation 11 and follows the European regulation for emissions from heavy-duty vehicles [3] and

recommendations made by Weiss *et al.* [1], where *and are the emissions mass and distance*

traveled for a given averaging window or test route, respectively. $EF_{x\ stand}$ was selected to be

the regulatory limit for the respective pollutant as given by Table 4.1.

Eq. 11

Table 4.1: Applicable regulatory emissions limits and other relevant vehicle emission reference values; US-EPA Tier2-Bin5 at intermediate useful life (5years/ 50,000 mi) for NO_x, CO, THC (eq. to

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NMOG), and PM [6]; EPA advertised CO_2 values for each vehicle [2]; Euro 5b/b+ for PN [4]

NO_x [g/km]	CO [g/km]	THC [g/km]	CO_2 [g/km]	PM [g/km]	PN [#/km]
0.043	2.610	0.056	193 (*Vehicle A*) 186 (*Vehicle B*) 288 (*Vehicle C*)	0.006	$6.0x10^{11}$

4.1 Average On-Road Emissions of Light-Duty Vehicles

This chapter will present average on-road emissions factors for gaseous, including NO_x, CO, THC, and CO_2 as well as particle number and mass emissions as measured over pre-defined test routes for all three vehicles (see Section 4.1.1) and over the cross-multi state driving route for *Vehicle B* (see Section 4.1.2). Results presented in this chapter are reported as total emissions over the respective routes and are not corrected for any data exclusion conditions. All three test vehicles exhibited warmed-up engine and after-treatment conditions before being operated over a test route, thus, average emissions results presented in this chapter will be compared to '*Bag-3*' emissions levels as measured over the FTP-75 chassis dynamometer test cycle.

4.1.1 Emissions over Pre-Defined Test Routes

Figure 4.1 along with Figure 4.2 show average NO_x emissions factors and their respective deviation ratio from the US-EPA Tier2-Bin5 standard, respectively, over the five pre-defined test routes for vehicles A through C. Additionally, Table 4.2 summarizes the average values and standard deviation (1σ) computed over two consecutive repetitions of a given test route. In general, NO_x emissions factors are highest for rural-up/downhill and lowest for high-speed highway driving conditions. All three test vehicles show distinct NO_x emissions patterns, with the LNT equipped *Vehicle A* exhibiting NO_x values 15 to 35, and the urea-SCR equipped *Vehicle B* NO_x values 5 to 20 times the Tier2-Bin5 standard depending on test route. *Vehicle C* was observed to emit NO_x emissions around or below the Tier2-Bin5 standard except during the rural-up/downhill route (Route 3), where emissions averaged 0.41 g/km or ~10 times the Tier2-Bin5 standard.

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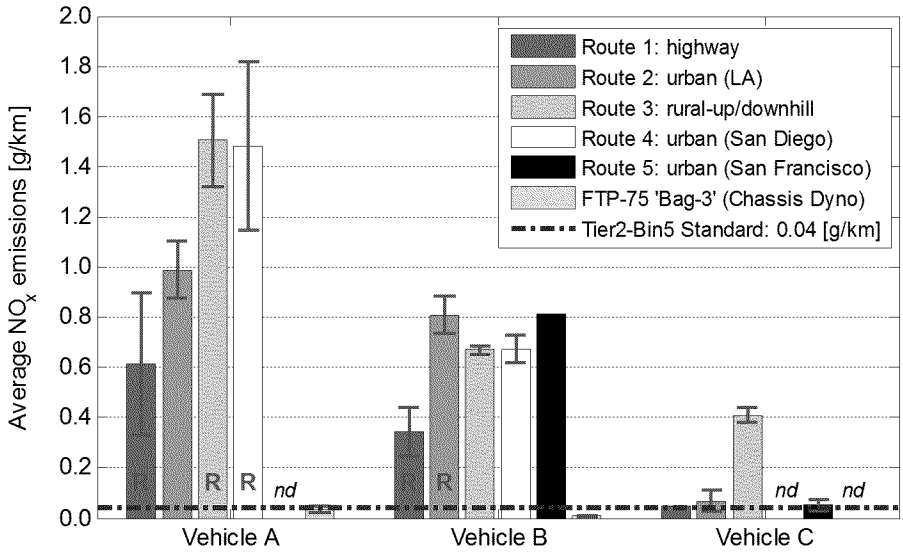

Figure 4.1: Average NO_x emissions of test vehicles over the five test routes compared to US-EPA Tier2-Bin5 emissions standard; repeat test variation intervals are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

Vehicle A and *B* are outfitted with the same engine model. However, they also feature different after-treatment systems allowing to conclude, based on the available data, that the LNT shows deficiencies over the urea-SCR system in efficiently reducing NO_x in-use, especially during highly transient, low-speed urban driving as well as high-load uphill driving. On the other hand, *Vehicles B* and *C* are both equipped with a similar after-treatment technology, namely urea-SCR, but show significantly different NO_x emissions factors for the same test routes. This could be caused by i) different after-treatment control strategies, ii) a difference in catalytic substrate between the two vehicles (different SCR type), iii) under-sized SCR catalyst for *Vehicle B*, or iv) different diesel exhaust fluid (DEF) injection strategy in case of *Vehicle B* to reduce DEF consumption, hence, increasing DEF re-filling intervals.

It has to be noted that all three vehicles were checked for possible engine or after-treatment malfunction codes using an ECU scanning tool prior to selecting each vehicle for this on-road measurement campaign, with none of them showing any fault code or other anomalies. The after-treatment system was assumed to be '*de-greened*' as all three vehicles had accumulated more than 3,000 to 4,000 miles, and no reduction in catalytic activity due to aging was expected as the total mileage was relatively low (< 15,000 miles) for all test vehicles.

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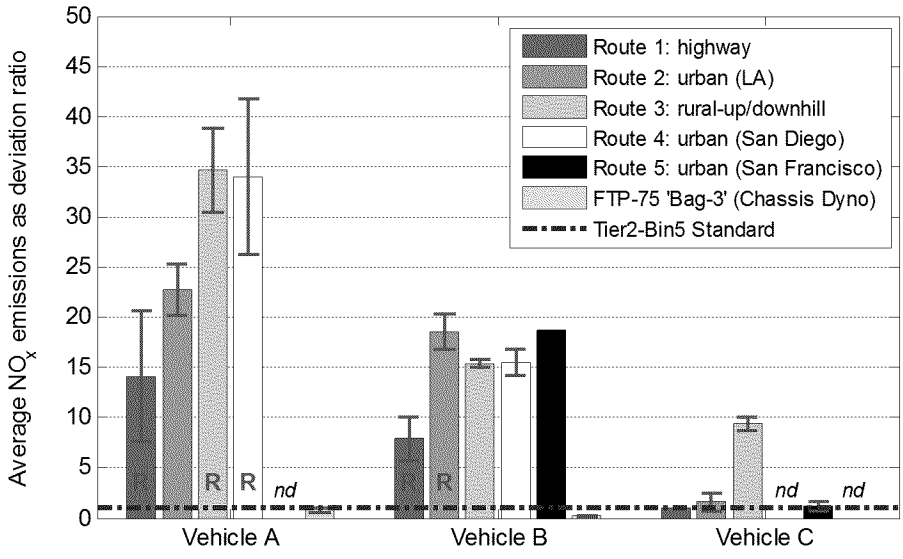

Figure 4.2: Average NO_x emissions of test vehicles over the five test routes expressed as deviation ratio; repeat test variation intervals are presented as ±1σ, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

Interestingly, NO_x emissions for *Vehicles A* and *B* were below the US-EPA Tier2-Bin5 standard for the weighted average over the FTP-75 during chassis dynamometer testing at CARB's El Monte facility. NO_x emissions were 0.022g/km ±0.006g/km (±1σ, 2 repeats) and 0.016g/km ±0.002g/km (±1σ, 3 repeats) for *Vehicle A* and *B*, respectively, during chassis dynamometer testing (i.e. weighted FTP-75 results). This is further confirmation that *Vehicles A* and *B* were operating as intended and did not have any malfunctions.

The LNT equipped *Vehicle A* shows increased variability between two consecutive test runs, especially for Routes 1, 3, and 4. This behavior coincides with DPF regeneration events (see Figure 4.43 through Figure 4.50) that are occurring during one of the repeats for the above listed routes. NO_x emissions factors increase by 97% (0.41 g/km to 0.81g/km), 19% (1.38g/km to 1.63g/km), and 38% (1.24g/km to 1.72g/km) for Routes 1, 3, and 4, respectively, between test runs with and without DPF regeneration events. It has to be mentioned that the same test run exhibiting the DPF regeneration event for Route 1 also experienced increased stop-and-go traffic conditions during evening rush-hours, thereby confounding the factors leading to the 97% increase in NO_x compared to the test run without DPF regeneration event. Referring to reference [31] presenting a detailed discussion of DPF regeneration as well as LNT D_eNO_x and D_eSO_x regeneration strategies and control mechanisms, it can be noted (from Figure 12 in [31]) that

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during an ongoing DPF regeneration event no cyclic D_eNO_x regeneration of the LNT occurs. As described by [31], DPF regeneration happens under oxygen surplus conditions ($\lambda > 1$) and is on the order of up to 15min in duration. Therefore, it is speculated that due to a lack of frequent enrichment of the exhaust gas ($\lambda < 1$) while DPF regeneration is ongoing, necessary LNT regeneration is inhibited, and thus, the NO_x storage catalyst becomes saturated with NO_x emissions starting to break through. Indeed, increased NO_x mass rates were observed from continuous data coinciding with DPF regeneration events during Routes 1, 3, and 4.

Furthermore, when comparing THC emissions factors shown in Figure 4.5 with NO_x emissions factors in Figure 4.1 for *Vehicle A*, it can be noticed that highest THC emissions are exhibited during test routes with lowest NO_x emissions, specifically, for Routes 1 and 2. Increased THC values could point towards an increased frequency of rich mode operation, thus, leading to an improved NO_x reduction over the LNT catalyst. However, no conclusive explanation can be presented herein for why this behavior is observed, especially considering the vastly different driving conditions experienced between Routes 1 and 2, with Route 1 being representative of highway and Route 2 of urban driving. Additionally, Route 1 included a test run with a DPF regeneration event which normally leads to increased THC emissions, however, appears to have been masked by the order of magnitude increase in THC emissions (see Figure 4.5) caused by this unexplained event.

Table 4.2: Average NO_x emissions in [g/km] of test vehicles over the five test routes; σ is standard deviation over two consecutive test runs, Route 1 for Vehicle A includes rush-hour/non rush-hour

Route		Vehicle A	Vehicle B	Vehicle C
Route 1: highway	μ	**0.614**	**0.344**	**0.048**
	σ	*0.283*	*0.096*	-
Route 2: urban (LA)	μ	**0.989**	**0.809**	**0.070**
	σ	*0.114*	*0.075*	*0.041*
Route 3: rural-up/downhill	μ	**1.505**	**0.671**	**0.409**
	σ	*0.181*	*0.016*	*0.029*
Route 4: urban (San Diego)	μ	**1.480**	**0.675**	-
	σ	*0.335*	*0.057*	-
Route 5: urban (San Francisco)	μ	-	**0.815**	**0.053**
	σ	-	-	*0.021*

Figure 4.3 along with Figure 4.4 show average CO emissions factors and their respective

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deviation ratio from the US-EPA Tier2-Bin5 standard, respectively, over the five pre-defined test routes for *Vehicles A* through *C*. Additionally, Table 4.3 summarizes the average values and standard deviations (1σ) computed over two consecutive repetitions of a given test route.

In general, CO emissions factors are close to two orders of magnitude lower than the applicable US-EPA Tier2-Bin5 standard for all three vehicles and no particular pattern in CO emissions rates can be found as a function of driving and/or route conditions. For *Vehicles A* and *B*, highest CO emissions factors were exhibited during urban driving in Los Angeles (i.e. Route 2), whereas *Vehicle C* showed highest CO for rural-up/downhill driving (i.e. Route 3), which however, is accompanied by a significant variation (of same order than mean value) between repeated test runs. The increased variation in CO emissions factor for *Vehicle B* over Route 2 coincides with a regeneration event during one of the test runs leading to an order of magnitude increase in CO emissions from 0.02g/km to 0.26g/km.

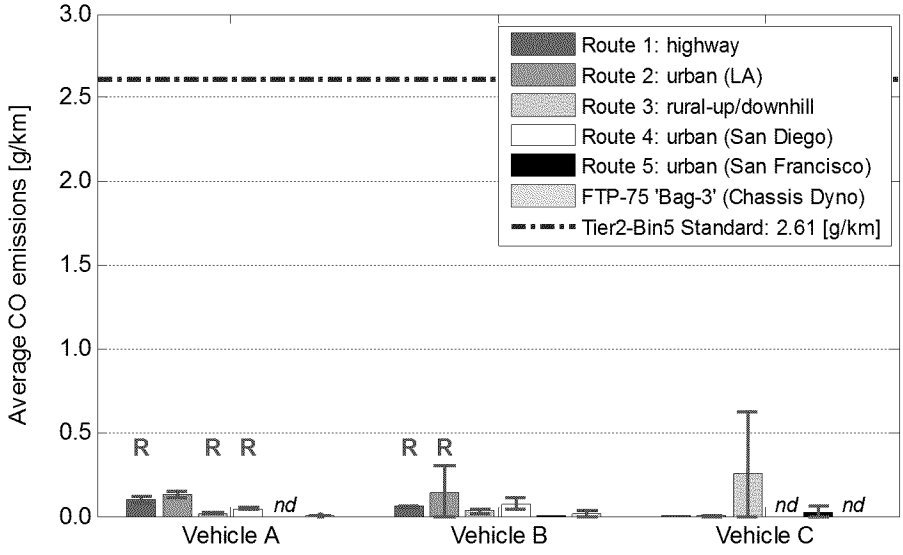

Figure 4.3: Average CO emissions of test vehicles over the five test routes compared to US-EPA Tier2-Bin5 emissions standard; repeat test variation intervals are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

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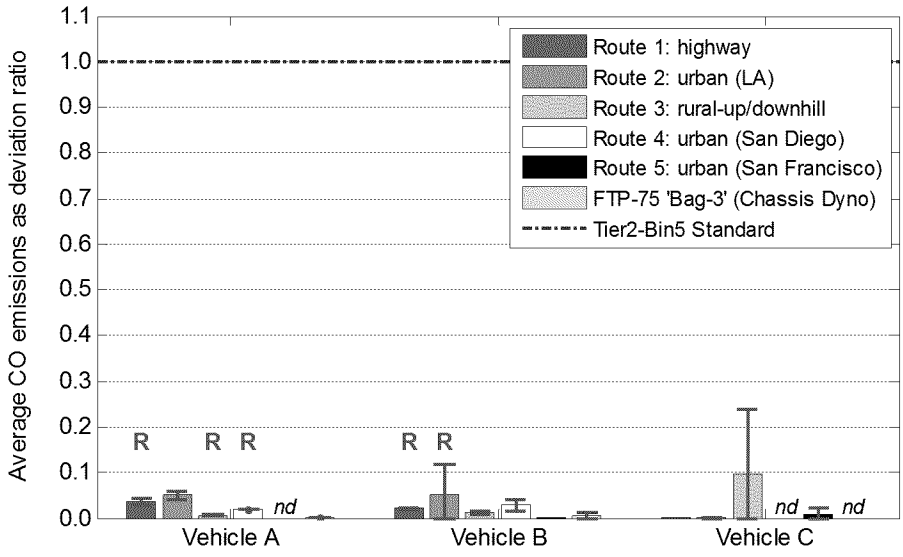

Figure 4.4: Average CO emissions of test vehicles over the five test routes expressed as deviation ratio; repeat test variation intervals are presented as ±1σ, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

Figure 4.5 along with Figure 4.6 show average THC emissions factors and their respective deviation ratio from the US-EPA Tier2-Bin5 standard, respectively, over the five pre-defined test routes for *Vehicles A* through *C*. Additionally, Table 4.4 summarizes the average values and standard deviations (1σ) computed over two consecutive repetitions of a given test route.

Table 4.3: Average CO emissions in [g/km] of test vehicles over the five test routes; σ is standard deviation over two consecutive test runs, Route 1 for Vehicle A includes rush-hour/non rush-hour

Route		Vehicle A	Vehicle B	Vehicle C
Route 1: highway	**μ**	**0.100**	**0.059**	**0.000**
	σ	0.019	0.004	-
Route 2: urban (LA)	**μ**	**0.130**	**0.138**	**0.004**
	σ	0.021	0.169	0.005
Route 3: rural-up/downhill	**μ**	**0.018**	**0.029**	**0.256**
	σ	0.005	0.010	0.369
Route 4: urban (San Diego)	**μ**	**0.048**	**0.076**	-
	σ	0.001	0.033	-
Route 5: urban (San Francisco)	**μ**	-	**0.007**	**0.027**
	σ	-	-	0.038

It has to be noted that chassis dynamometer testing of *Vehicle A* and *B* indicated that 95 - 98% of the total hydrocarbons emitted were measured as methane (CH_4) which is somewhat surprising for diesel fueled vehicles, however, could be attributed to reactions over the catalytic

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surface of the oxidation catalyst or the LNT in case of *Vehicle A*. The NMOG Tier2-Bin5 standard was chosen for comparison as it is currently the only applicable standard for hydrocarbons for Tier 2 light-duty vehicles in the US and since NMOG primarily comprises NMHC for diesel and gasoline fueled vehicles. However, in light of the large CH_4/THC ratio observed during chassis dynamometer testing, conclusions between the measured THC emissions during on-road operation and the NMOG standard have to be drawn with caution.

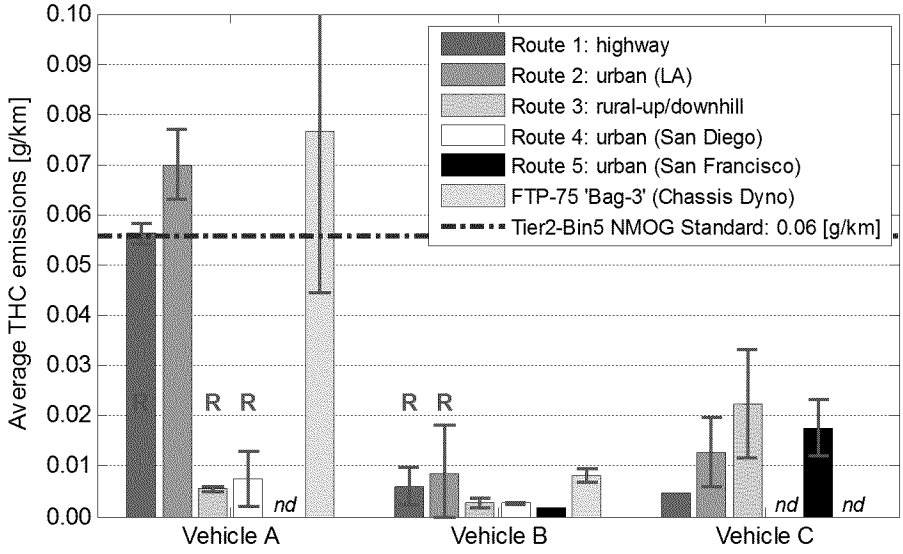

Figure 4.5: Average THC emissions of test vehicles over the five test routes compared to US-EPA Tier2-Bin5 emissions standard; repeat test variation intervals are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving, '*R*' includes DPF regeneration events.

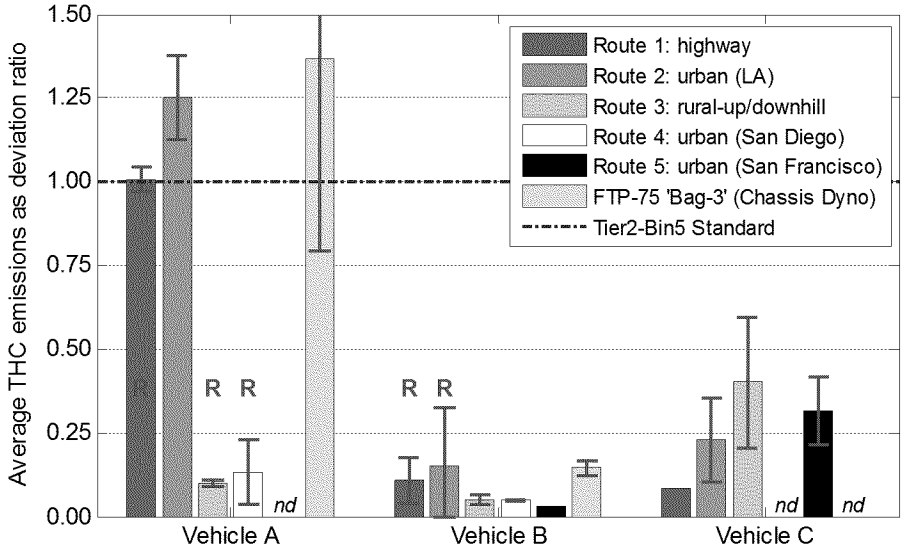

Figure 4.6: Average THC emissions of test vehicles over the five test routes expressed as deviation ratio; repeat test variation intervals are presented as ±1σ, '*R*' designates routes including a test with

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DPF regeneration event, '*nd*' - no data available

In general, THC emissions factors are well below the US-EPA Tier2-Bin5 NMOG standard for *Vehicles B* and *C* as well as over Routes 3 and 4 for *Vehicle A*. Only for *Vehicle A* and Routes 1 and 2, THC emissions were observed at (i.e. Route 1, highway) or exceeding (i.e. Route 2, urban Los Angeles, by 1.25) the NMOG standard. However, this has already been discussed in more detail along with the average NO_x results above. *Vehicle A* and *B* showed a tendency for increased THC emissions during test runs with DPF regeneration events compared to tests without such events, however, the same has not been observed for *Vehicle C*.

Table 4.4: Average THC emissions in [g/km] of test vehicles over the five test routes; σ is standard deviation over two consecutive test runs, Route 1 for Vehicle A includes rush-hour/non rush-hour

Route		Vehicle A	Vehicle B	Vehicle C
Route 1: highway	μ	**0.056**	**0.006**	**0.005**
	σ	*0.002*	*0.004*	-
Route 2: urban (LA)	μ	**0.070**	**0.009**	**0.013**
	σ	*0.007*	*0.010*	*0.007*
Route 3: rural-up/downhill	μ	**0.005**	**0.003**	**0.022**
	σ	*0.000*	*0.001*	*0.011*
Route 4: urban (San Diego)	μ	**0.007**	**0.003**	-
	σ	*0.005*	*0.000*	-
Route 5: urban (San Francisco)	μ	-	**0.002**	**0.018**
	σ	-	-	*0.006*

Figure 4.7 along with Figure 4.8 show average CO_2 emissions factors and their respective deviation ratio from EPA advertised CO_2 values for each vehicle, respectively, over the five pre-defined test routes for vehicles A through C. Additionally, Table 4.5 summarizes the average values and standard deviations (1σ) computed over two consecutive repetitions of a given test route. In general, and as expected, highway driving showed lowest CO_2, whereas urban/suburban driving conditions lead to highest CO_2 emissions factors.

Since both *Vehicle A* and *B* were equipped with the same engine their CO_2 consumption pattern appear similar in Figure 4.7. Routes 1 and 2 are characterized by higher average vehicle speeds and reduced amount of stop/go conditions (especially for highway Route 1) which translates into lower vehicle acceleration events and thus, lower CO_2 emissions ultimately leading to improved fuel economy over these routes as shown in Figure 4.13.

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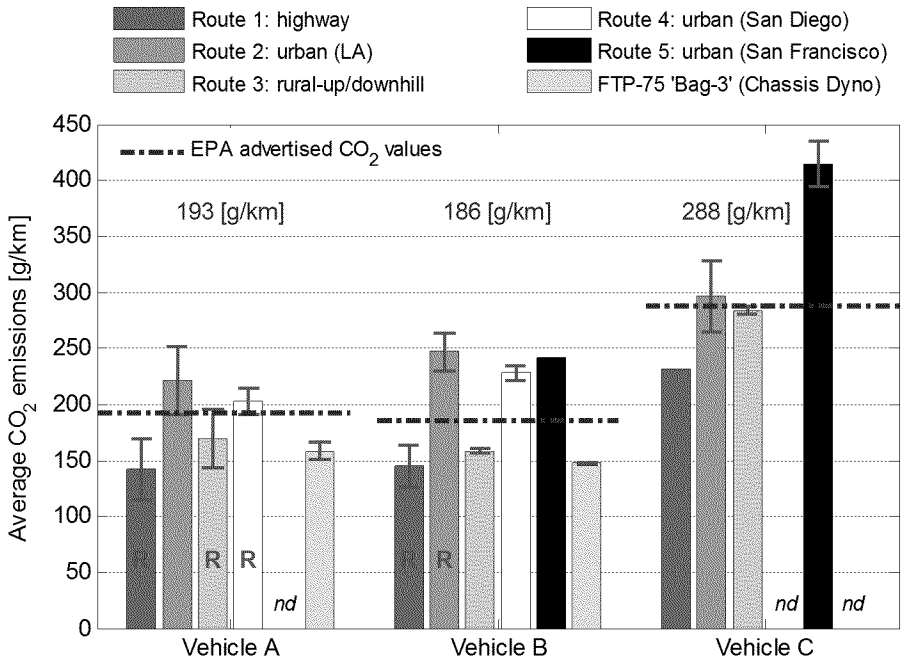

Figure 4.7: Average CO_2 emissions of test vehicles over the five test routes compared to EPA advertised CO_2 values for each vehicle; repeat test variation intervals are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

On the other hand, urban driving conditions lead to increased fuel consumption, hence, more CO_2 emissions as seen for urban routes 2, 4, and 5. Differences between CO_2 emissions factors for *Vehicle A* and *B* could be attributed to varying traffic patterns over a given route, influences of ambient conditions as both vehicles were tested on a different day (however, within the span of two weeks during March), and most importantly variations in driving style as the experiments have been conducted with three different drivers.

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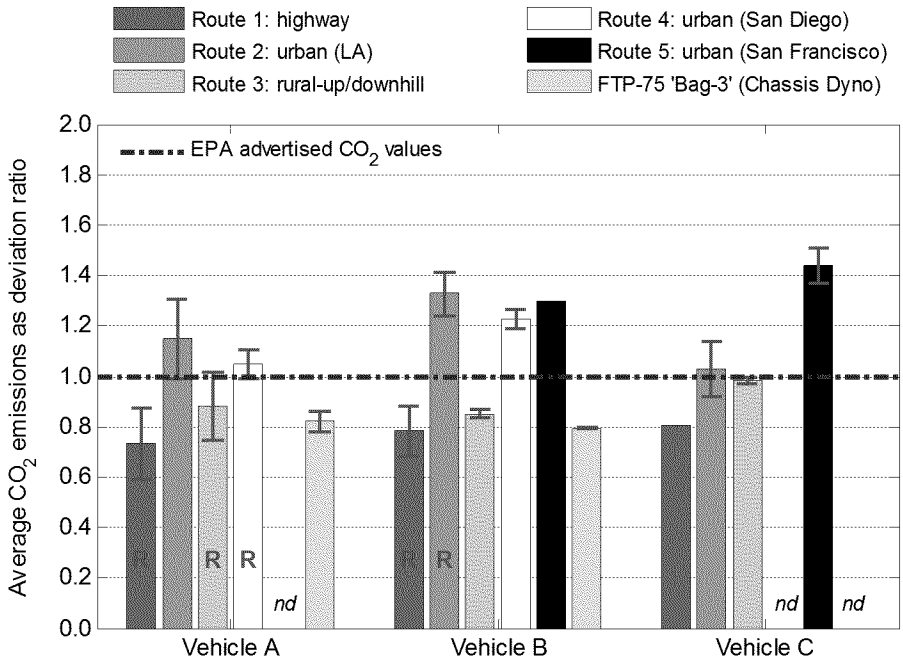

Figure 4.8: Average CO_2 emissions of test vehicles over the five test routes expressed as deviation ratio from the EPA advertised CO_2 values; repeat test variation intervals presented as ±1σ, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

Table 4.5: Average CO_2 emissions in [g/km] of test vehicles over the five test routes; σ is standard deviation over two consecutive test runs, Route 1 for Vehicle A includes rush-hour/non rush-hour

Route		Vehicle A	Vehicle B	Vehicle C
Route 1: highway	μ	**141.9**	**145.6**	**231.8**
	σ	*27.0*	*18.8*	-
Route 2: urban (LA)	μ	**221.7**	**246.9**	**296.3**
	σ	*30.1*	*16.2*	*32.1*
Route 3: rural-up/downhill	μ	**169.8**	**158.6**	**283.6**
	σ	*25.6*	*2.5*	*3.6*
Route 4: urban (San Diego)	μ	**202.3**	**228.2**	-
	σ	*11.5*	*6.8*	-
Route 5: urban (San Francisco)	μ	-	**241.8**	**414.4**
	σ	-	-	*20.2*

Highway driving (i.e. Route 1) for *Vehicle A* includes non-rush-hour as well as evening rush-hour conditions causing the variability in CO_2 emissions factor seen in Figure 4.7. During rush-hour conditions, CO_2 emissions increased by ~31% from 123g/km to 161g/km. Furthermore, based on data for *Vehicles A* and *B*, it is observed that CO_2 emissions are generally increased

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during test runs with DPF regeneration events which could be explained by the oxidation of carbon from the DPF substrate as well additional fuel injected to augment exhaust gas and after-treatment temperatures in order to initiate and sustain DPF regeneration.

Overall, CO_2 emissions from *Vehicles A* and *B* compare well with CO_2 emissions observed during chassis dynamometer testing over the NEDC which consists of a dedicated urban/suburban (i.e. '*Bag 1*') and highway (i.e. '*Bag 2*') driving portion. The urban/suburban driving portion of the NEDC exhibited 212.3g/km ±11.2g/km (±1σ, 3 tests of which are 2 with *Vehicle A* and 1 with *Vehicle B*), whereas the highway driving resulted in 148.0g/km ±12.9g/km (±1σ, same sample set) of CO_2 on the chassis dynamometer.

Finally, increased variability was observed over the two urban routes in Los Angeles and San Francisco (i.e. Routes 2 and 5) for *Vehicle C*, which can be attributed to differences in driving style between the two drivers, as well as changing traffic patterns between repeated test runs. Furthermore, the topographical differences between Routes 2 and 5 (flat vs. hilly) seem to influence the CO_2 emissions factor to a higher degree for *Vehicle C* as compared to *Vehicle B*. This could be caused by the heavier overall weight of *Vehicle C*, which was ~54% heavier than *Vehicle B*, as well as the larger engine (~52% larger displacement for *Vehicle C*), leading to more aggressive accelerations, especially under the hilly and often larger road grade conditions as experienced over Route 5 (i.e. San Francisco).

Figure 4.9 along with Figure 4.10 show average particulate mass (PM) emissions factors and their respective deviation ratio from the US-EPA Tier2-Bin5 standard, respectively, over the five pre-defined test routes for *Vehicles A* and *B*. Additionally, Table 4.6 summarizes the average values and standard deviations (1σ) computed over two consecutive repetitions of a given test route. It has to be noted that particulate masses reported in Figure 4.9 and Figure 4.10 are not directly measured masses via traditional filter samples, but rather inferred from a charge based real-time particle sensor as described in more detail in Section 3.3.2.2.

In general, particulate mass emissions were observed to be well below the applicable US-EPA Tier2-Bin5 standard over all test routes for *Vehicles A* and *B* with the exception of Route 3 for *Vehicle A* which exhibited a DPF regeneration event during one of the test runs. Average PM emissions increased by two orders of magnitude from 0.01mg/km to 5.7mg/km between the test run with and without DPF regeneration for Route 3.

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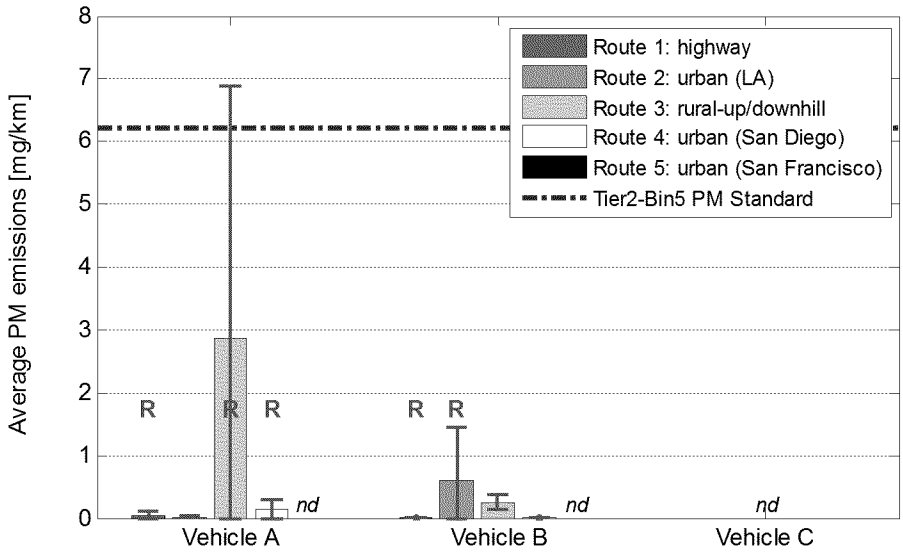

Figure 4.9: Average PM emissions of test vehicles over the five test routes compared to US-EPA Tier2-Bin5 emissions standard; repeat test variation intervals are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving, no PM data collected for Vehicle C, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

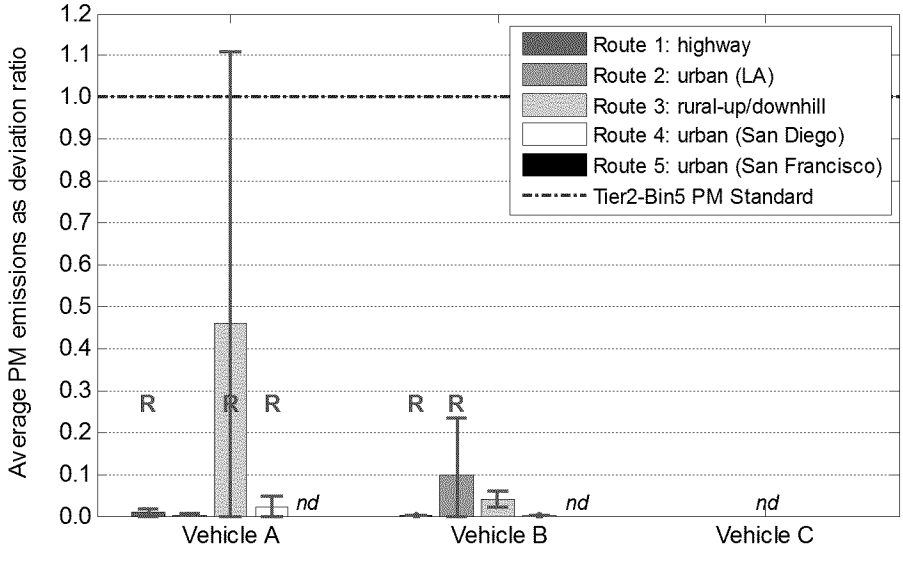

Figure 4.10: Average PM emissions of test vehicles over the five test routes expressed as deviation ratio; uncertainty repeat test variation are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving, no PM data collected for Vehicle C, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

Table 4.6: Average PM emissions in [mg/km] of test vehicles over the five test routes; σ is standard deviation over two consecutive test runs, Route 1 for Vehicle A includes rush-hour/non rush-hour

Route		Vehicle A	Vehicle B	Vehicle C
Route 1: highway	**μ**	**0.051**	**0.007**	**-**

	σ	*0.058*	*0.001*	-
Route 2: urban (LA)	**μ**	**0.015**	**0.613**	-
	σ	*0.012*	*0.839*	-
Route 3: rural-up/downhill	**μ**	**2.858**	**0.250**	-
	σ	*4.023*	*0.117*	-
Route 4: urban (San Diego)	**μ**	**0.137**	**0.005**	-
	σ	*0.160*	*0.001*	-
Route 5: urban (San Francisco)	**μ**	-	-	-
	σ	-	-	-

Figure 4.11 along with Figure 4.12 show average particulate number (PN) emissions factors and their respective deviation ratio from the European Euro 5b/b+ standard (i.e. $6x10^{11}$ #/km), respectively, over the five pre-defined test routes for *Vehicles A* and *B*. Additionally, Table 4.7 summarizes the average along with minimum and maximum values computed over two consecutive repetitions of a given test route. Similarly to PM emissions, particulate numbers presented herein are inferred from a charge based real-time particle sensor as described in more detail in Chapter 3.3.2.2.

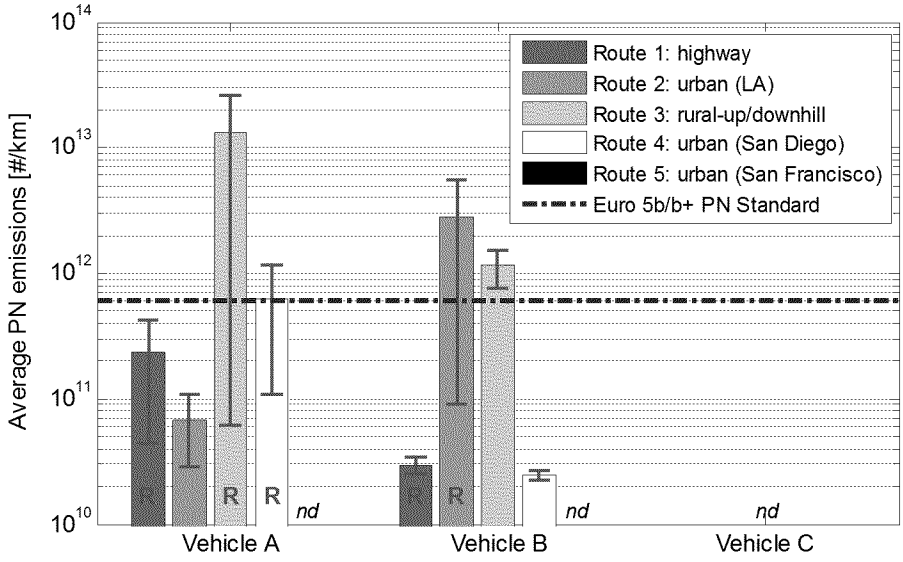

Figure 4.11: Average PN emissions of test vehicles over the five test routes compared to Euro 5b/b+ emissions standard; repeat test variation intervals are presented as minimum/maximum test value; Route 1, Vehicle A includes rush-hour/non rush-hour driving, no PM data collected for Vehicle C, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

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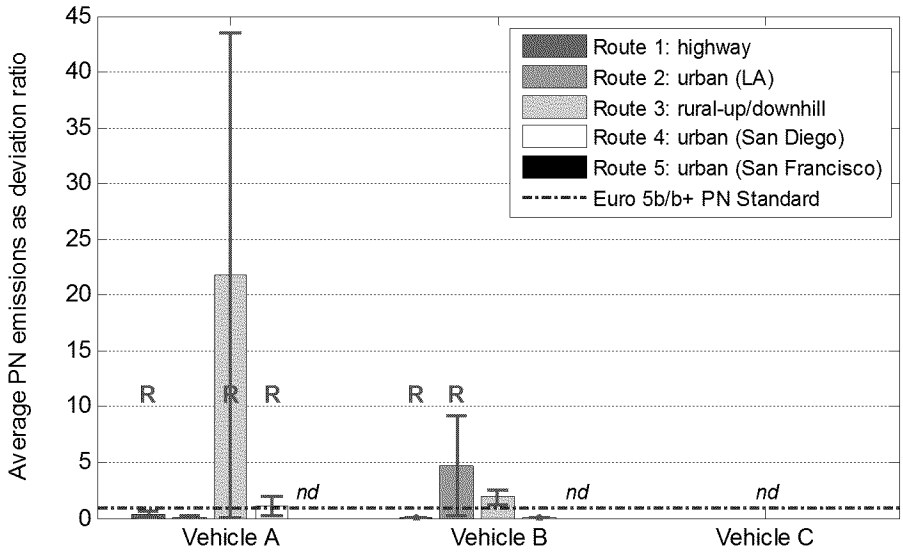

Figure 4.12: Average PN emissions of test vehicles over the five test routes expressed as deviation ratio; repeat test variation intervals are presented as minimum/maximum test value, no PM data collected for Vehicle C, '*R*' designates routes including a test with DPF regeneration event, '*nd*' - no data available

Table 4.7: Average, minimum, and maximum PN emissions in [#/km] of test vehicles over the five test routes; Route 1 for Vehicle A includes rush-hour/non rush-hour

Route		Vehicle A	Vehicle B	Vehicle C
Route 1: highway	**μ**	**2.32E+11**	**2.98E+10**	-
	Min	*4.43E+10*	*2.54E+10*	-
	Max	*4.20E+11*	*3.41E+10*	-
Route 2: urban (LA)	**μ**	**6.85E+10**	**2.80E+12**	-
	Min	*2.88E+10*	*9.05E+10*	-
	Max	*1.08E+11*	*5.51E+12*	-
Route 3: rural-up/downhill	**μ**	**1.31E+13**	**1.14E+12**	-
	Min	*6.24E+10*	*7.65E+11*	-
	Max	*2.61E+13*	*1.52E+12*	-
Route 4: urban (San Diego)	**μ**	**6.28E+11**	**2.48E+10**	-
	Min	*1.09E+11*	*2.25E+10*	-
	Max	*1.15E+12*	*2.70E+10*	-
Route 5: urban (San Francisco)	**μ**	-	-	-
	Min	-	-	-
	Max	-	-	-

The European Euro 5b/b+ standard has been chosen for comparison as it is currently the only particulate number standard in legislation, and applicable to new vehicles sold within the

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confines of the European Union [4].

Increased variation in average particulate number emissions was observed for test routes that included DPF regeneration events during one of the route repetitions. DPF regeneration events lead to a one or two order of magnitude increase in PN emissions factors when compared to test runs without DPF regeneration as seen for Routes 1, 3, and 4 as well as Routes 2, and 3 for *Vehicle A* and *B*, respectively. Route 3 for *Vehicle B* exhibited DPF regeneration events during both repeats (see Figure 4.48) thus, leading to the observed low variability between tests.

In general, average PN emissions factors remain an order of magnitude below the applicable Euro 5b/b+ standard for all routes/tests that did not include DPF regeneration events. However, for routes/tests with DPF regeneration particle number emissions increase rapidly and exceed the Euro 5b/b+ standard in most cases (i.e. Route 3, 4 for *Vehicle A*; Route 2, 3 for *Vehicle B*).

Figure 4.13 a) and b) present average fuel economy values in units [km/L] and [mpg], respectively, over the five pre-defined test routes for vehicles A through C. Additionally, Table 4.8 summarizes the average values and standard deviations (1σ) computed over two consecutive repetitions of a given test route.

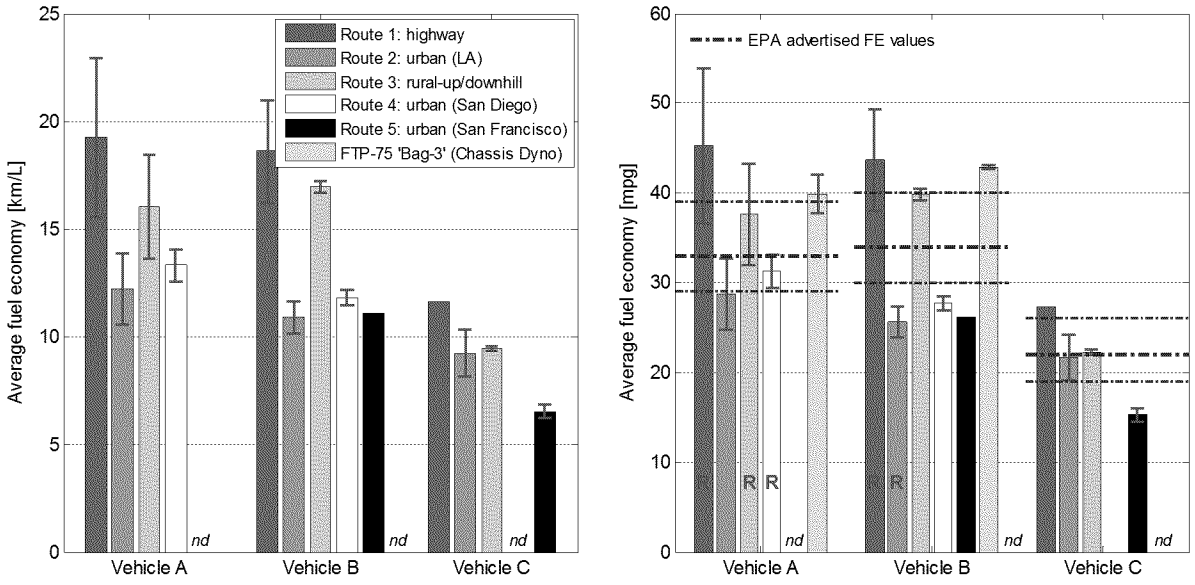

Figure 4.13: Average fuel economy of test vehicles over the five test routes in km/L and mpg; repeat test variation intervals are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving

As fuel economy values are derived via carbon balance with CO_2 emissions being the

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dominant fraction, they essential become a mirror of CO_2 emissions fractions. Therefore, any observations discussed earlier for CO_2 emissions are valid as well for fuel economy results, hence, in general, and as expected, highway driving showed increased fuel economy over urban/suburban driving conditions.

Table 4.8: Average fuel economy in [mpg] of test vehicles over the five test routes; σ is standard deviation over two consecutive test runs, Route 1 for Vehicle A includes rush-hour/non rush-hour

Route		Vehicle A	Vehicle B	Vehicle C
Route 1: highway	μ	**45.3**	**43.7**	**27.3**
	σ	*8.6*	*5.7*	-
Route 2: urban (LA)	μ	**28.7**	**25.6**	**21.7**
	σ	*3.9*	*1.7*	*2.6*
Route 3: rural-up/downhill	μ	**37.6**	**39.9**	**22.3**
	σ	*5.7*	*0.6*	*0.3*
Route 4: urban (San Diego)	μ	**31.3**	**27.7**	-
	σ	*1.8*	*0.8*	-
Route 5: urban (San Francisco)	μ	-	**26.2**	**15.3**
	σ	-	-	*0.8*

Average fuel economy for highway driving with *Vehicles A* and *B* was 45.3 mpg ±8.6mpg (±σ1) and 43.7mpg ±5.7mpg (±σ1), respectively, and 27.3 mpg (no repetition) for *Vehicle C* which is ~39% lower compared to *Vehicles A* and *B*. On the other hand, urban/suburban driving results in average fuel economies of 30.0mpg ±2.9mpg (±σ1) and 26.6 mpg ±1.4mpg (±σ1) for *Vehicles A* and *B*, respectively, and 18.5mpg ±4.0mpg (±σ1) for *Vehicle C* which is 35% lower compared to *Vehicles A* and *B*. Overall, urban/suburban driving leads to a 32-39% reduction in fuel economy over highway driving.

Figure 4.14 depicts average engine work values and standard deviations (1σ) in units [kWh] over the five pre-defined test routes for vehicles A through C. The average engine work presented herein is inferred from estimated real-time engine power calculated according to Equation 12, and based on an assumed calorific value for the test fuel and combustion efficiency as well as the real-time fuel consumption derived from a carbon balance using the measured exhaust constituents as input parameter. The calorific value for the diesel fuel was selected as 43,500kJ/kg and the combustion efficiency as 0.35. It can be noticed form Figure 4.14 that the engine of *Vehicle C* produces more work as compared to *Vehicles A* and *B* which can be

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explained by the overall heavier vehicle and larger engine for *Vehicle C*.

Eq. 12

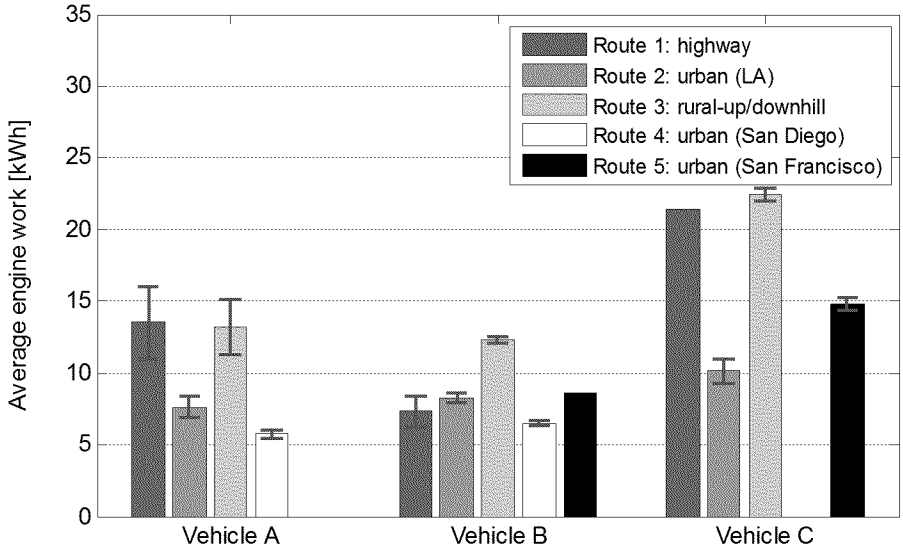

Figure 4.14: Average engine work of test vehicles over the five test routes, calculated from carbon balance and combustion efficiency; repeat test variation intervals are presented as ±1σ; Route 1 for Vehicle A includes rush-hour/non rush-hour driving

4.1.2 Emissions over Cross-Multi-State Driving Route

This section will report averaged emissions factors for gaseous and particulate matter emissions from *Vehicle B* over the cross-multi state driving route. Each figure in this section will present averaged emissions factors for route portions between Los Angeles and Seattle that comprise predominantly highway driving with the addition of two routes representative of urban/suburban driving in Seattle, WA and Sacramento, CA. Additionally, average values and standard deviations (1σ) computed separately for highway and urban/suburban portions of the route as well as the grand average over the entire cross-multi state driving route are included to the right of each individual graph.

Figure 4.15 along with Figure 4.16 show average NO_x emissions factors and their respective deviation ratio from the US-EPA Tier2-Bin5 standard, respectively. Over the entire route, NO_x emissions factors were on average 0.26g/km ±0.21g/km (±1σ) or approx. 6 times exceeding the

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US-EPA Tier2-Bin5 standard. NO_x emissions factors for urban/suburban driving portions were observed at twice the level of highway-only route portions with 0.52g/km ±0.27g/km versus 0.24g/km ±0.19g/km NO_x, respectively. For highway driving average, NO_x emissions factors were close to NO_x emissions observed during Route 1 (i.e. highway) driving (i.e. 0.344g/km ±0.096g/km), considering the large variation in NO_x emissions over the highway portions of the cross-multi state route. Urban driving in Seattle (i.e. Route 6) exhibits NO_x emissions factors at a similar level as seen for the pre-defined urban Routes 2, 4 and 5 shown in Figure 4.1. On the other hand, urban/highway driving in Sacramento (i.e. Route 7) shows greatly reduced NO_x emissions compared to other urban routes, which is primarily due to the large share of highway driving contained in this route segment (> 60% by distance), thus, causing the large variability seen for total urban/suburban average NO_x emissions factor.

However, more interesting is the large variation in NO_x emissions factors over highway driving and in particular portions of the route where NO_x emissions were observed below the US-EPA Tier2-Bin5 standard. In order to provide a possible explanation, Figure 4.15 needs to be interpreted in light of the vehicle speed and altitude graphs for the cross-multi state driving route shown in Figure 3.18 a) and b), respectively. Increased NO_x emissions during route portions 1 and 2 as well as 8 through 11 (see Figure 4.15) coincide with up/downhill driving conditions while crossing mountain ranges near Los Angeles and in Northern California/Southern Oregon, respectively, with elevation changes of up to 1200 meters. On the other hand, NO_x emissions at or below the US-EPA Tier2-Bin5 standard (see route portions 3 through 6 in Figure 4.15) were observed while traveling northbound on Interstate 5 through the San Joaquin Valley characterized by low or negligible changes in altitude (i.e. near zero road grade), and with the vehicle operated in cruise-control mode at approximately 120km/h.

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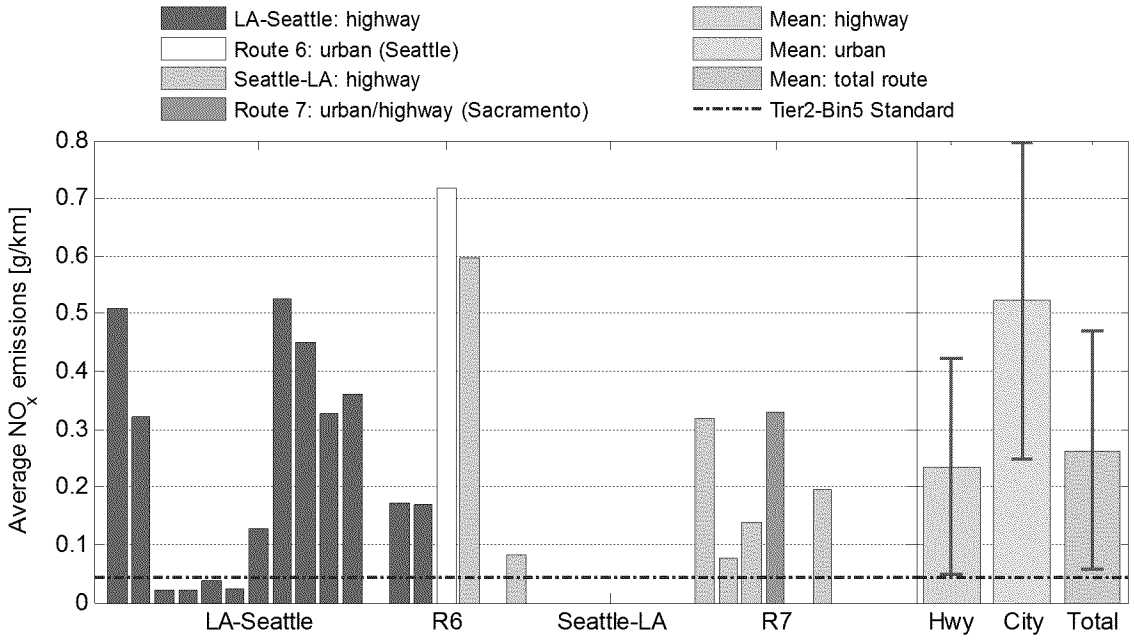

Figure 4.15: Average NO_x emissions of test vehicle over cross-multi-state driving route portions compared to US-EPA Tier2-Bin5 emissions standard; repeat test variations are presented as ±1σ

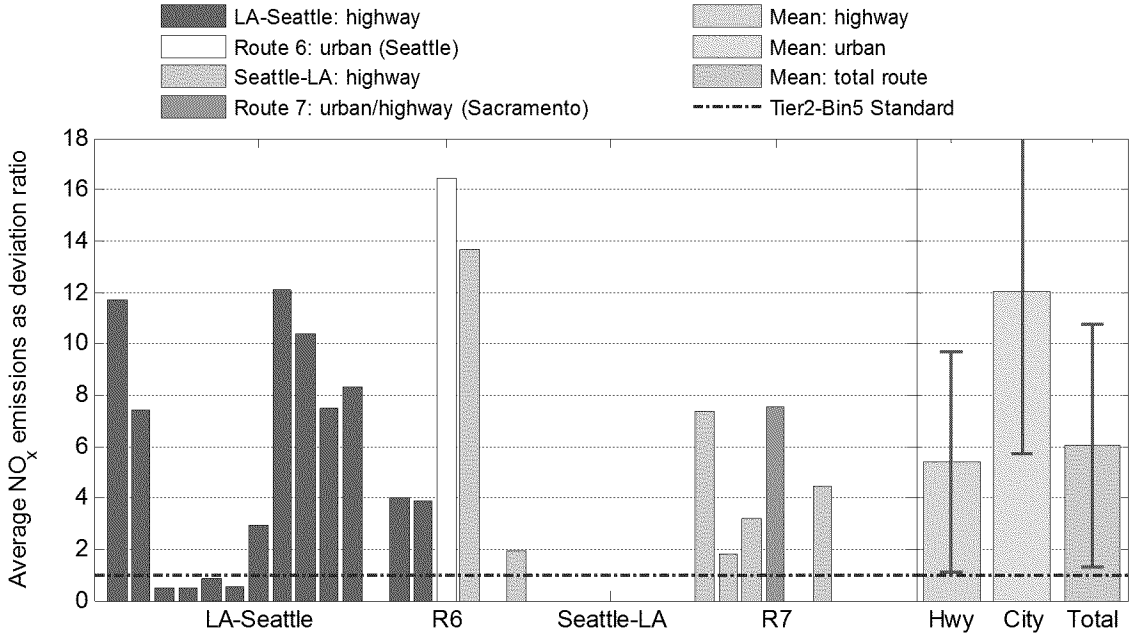

Figure 4.16: Average NO_x emissions of test vehicle over cross-multi-state driving route portions expressed as deviation ratio; repeat test variations are presented as ±1σ

Figure 4.17 along with Figure 4.18 show average CO emissions factors and their respective deviation ratio from the US-EPA Tier2-Bin5 standard, respectively. In general, and as expected, CO emissions were observed at two orders of magnitude below the applicable standard and no

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specific pattern could be identified from the results.

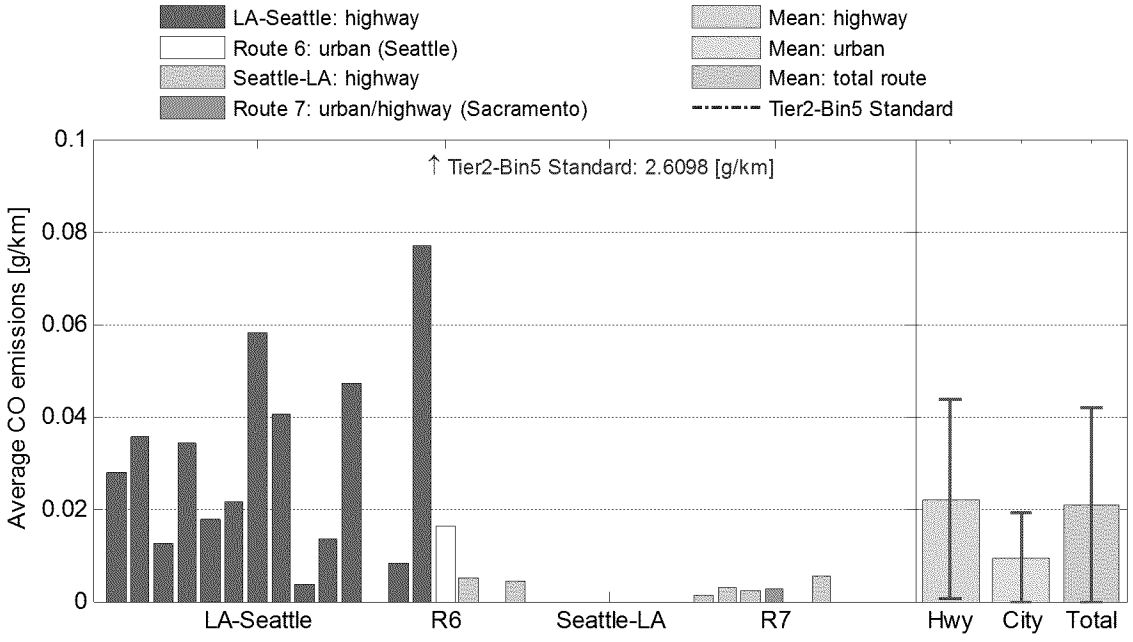

Figure 4.17: Average CO emissions of test vehicle over cross-multi-state driving route portions compared to US-EPA Tier2-Bin5 emissions standard; repeat test variations are presented as ±1σ

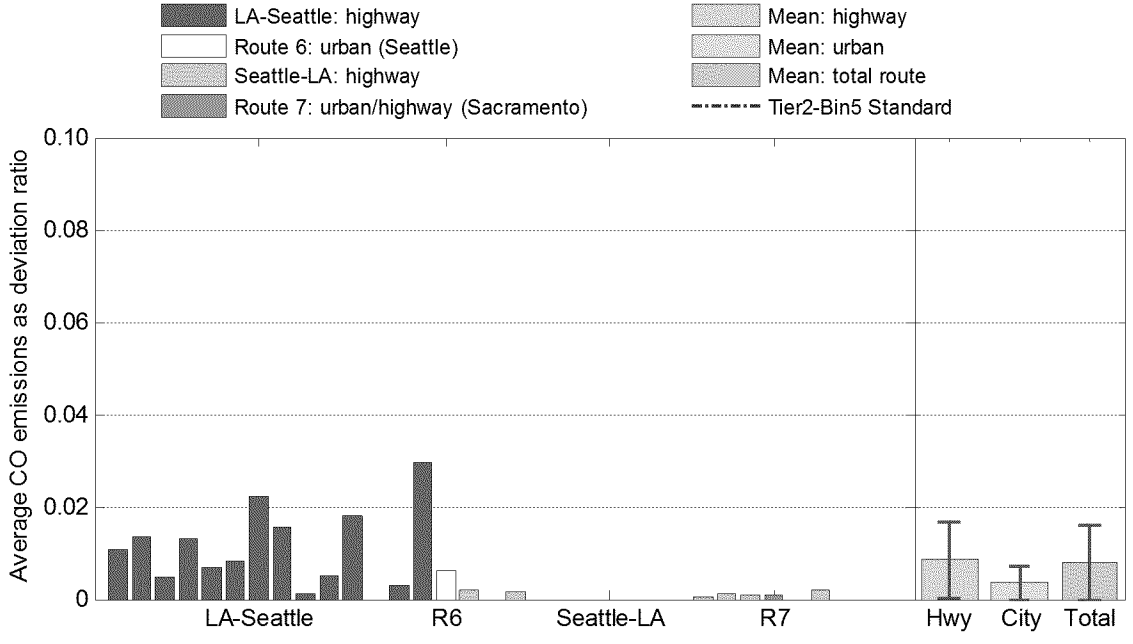

Figure 4.18: Average CO emissions of test vehicle over cross-multi-state driving route portions expressed as deviation ratio; repeat test variations are presented as ±1σ

Similarly, Figure 4.19 along with Figure 4.20 show average THC emissions factors and their respective deviation ratio from the US-EPA Tier2-Bin5 standard, respectively, which were well

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below the applicable emissions standard.

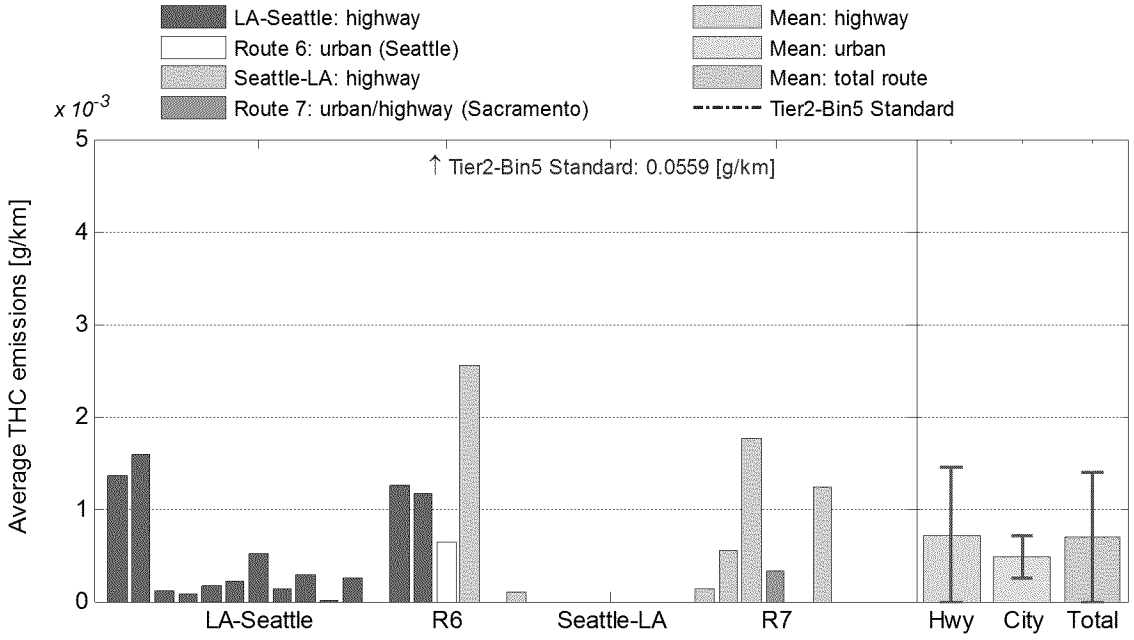

Figure 4.19: Average THC emissions of test vehicle over cross-multi-state driving route portions compared to US-EPA Tier2-Bin5 emissions standard; repeat test variations are presented as ±1σ

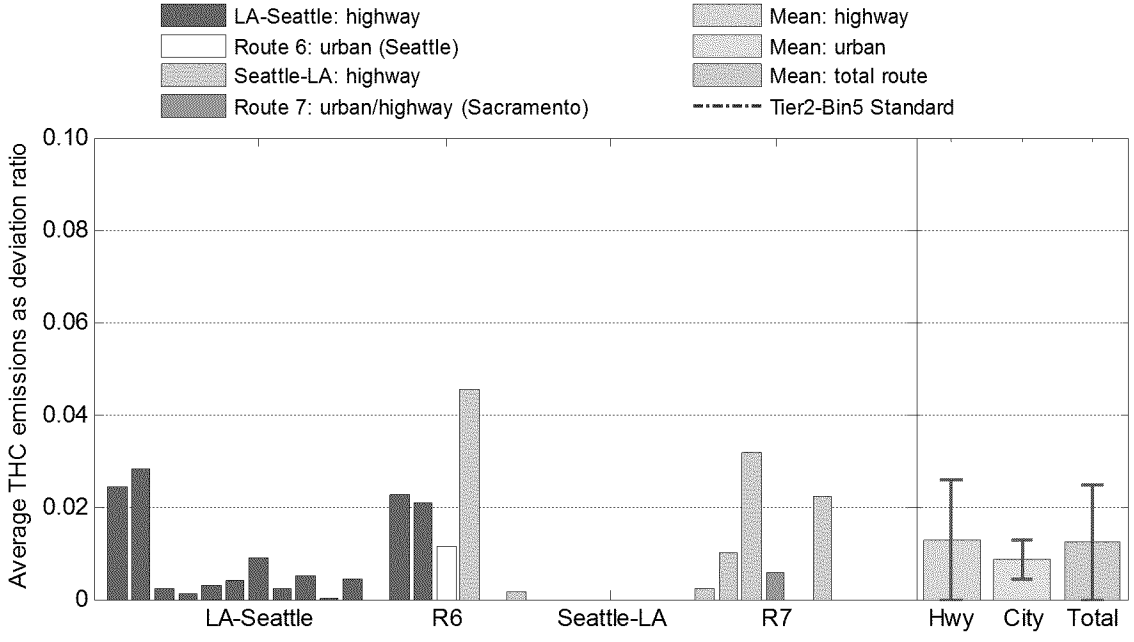

Figure 4.20: Average THC emissions of test vehicle over cross-multi-state driving route portions expressed as deviation ratio; repeat test variations are presented as ±1σ

Figure 4.21 along with Figure 4.22 show average CO_2 emissions factors and their respective deviation ratio from the EPA advertised CO2 value for Vehicle B (i.e. 186 g/km), respectively,

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over the individual sub-portions of the cross-multi state driving route.

As already has been observed for the pre-defined test routes (see Figure 4.7) CO_2 emissions are in general lowest for highway driving, whereas urban/suburban driving conditions lead to increased CO_2 emissions factors (155g/km ±14.4g/km vs. 178g/km ±19.9g/km). It has to be noted again that the second urban route presented in Figure 4.21 (i.e. Route 7) includes a proportionally large amount of highway driving and, thus, skews the CO_2 emissions factor for this route towards a lower value as was typically experienced for *Vehicle B* over urban driving conditions (e.g. see Route 2, 4, 5, and 6). On average, CO_2 emissions are ~5% below the EPA/NHTSA CO_2/CAFE standard for LDV/PC's during highway operation. Increased CO_2 emissions as observed for route portions 7 and 8 coincide with larger elevation changes and therefore steeper road grades as can be seen from Figure 3.18 thus, resulting in increased engine load demand and thereby emitting more CO_2 on a distance-specific basis.

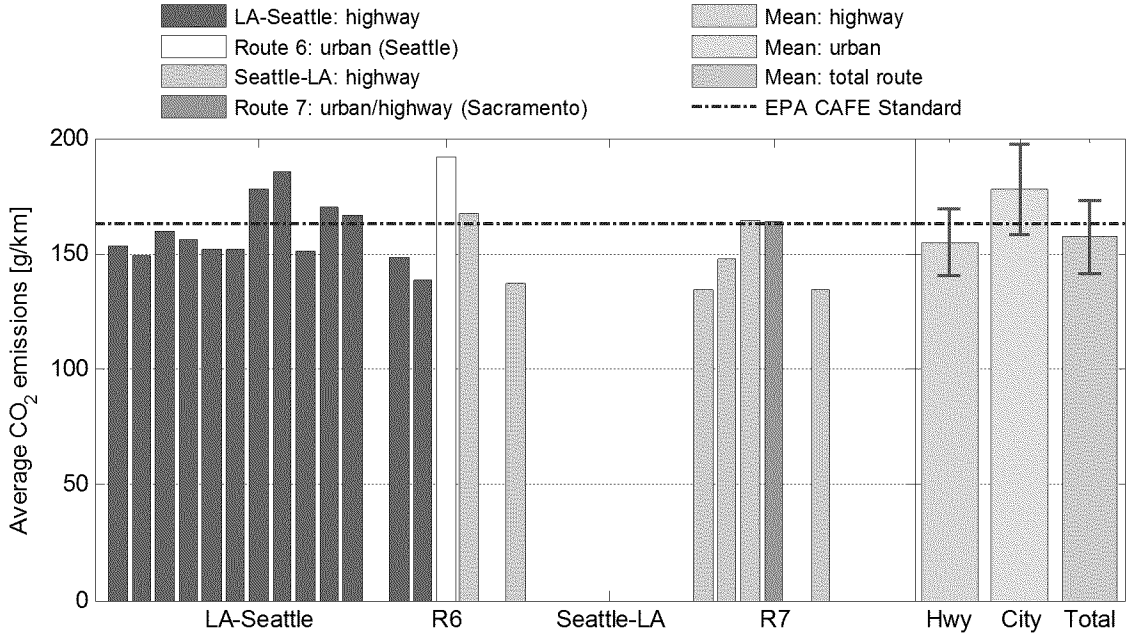

Figure 4.21: Average CO_2 emissions of test vehicle over cross-multi-state driving route portions compared to 2012 EPA/NHTSA fleet-wide average CO_2 emissions standard (passenger car); repeat test variations are presented as ±1σ

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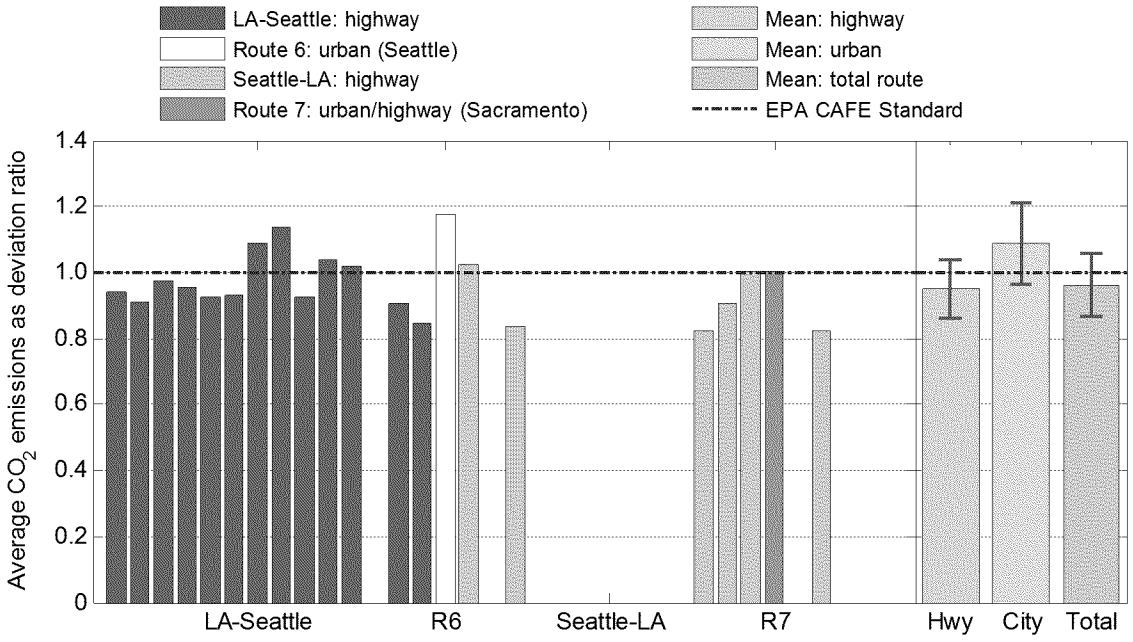

Figure 4.22: Average CO_2 emissions of test vehicle over cross-multi-state driving route portions expressed as deviation ratio; repeat test variations are presented as ±1σ

Figure 4.23 shows average particulate matter mass emissions factors whereas Figure 4.24 presents average particulate matter number emissions factors along with the respective regulatory standards, specifically, US-EPA Tier2-Bin5 for PM and Euro 5b/b+ for PN. It has to be noted again that both PM and PN emissions are inferred from real-time particle charge measurements using the Pegasor particle sensor.

In general, PM emissions are on the order of 0.01mg/km ±0.005mg/km (±1σ), thereby nearly 100% (99.89%) below the US-EPA Tier2-Bin5 standard. From Figure 4.23 three portions of the cross-multi state driving route, namely, portions 2, 7, and 13 stand out showing distinctly different PM emissions levels as compared to all other route portions. This is due to DPF regeneration events occurring during these three route portions leading to a nearly 700 fold increase in PM emissions to 4.55mg/km ±0.003mg/km (±1σ). However, even during DPF regeneration events PM emissions levels remain ~27% below the regulatory standard of 6.2mg/km (i.e. US-EPA Tier2-Bin5), owing to the diesel particulate filters ability to retain particulate matter mass emissions with high efficiency from the exhaust gas stream.

Figure 4.24 shows a similar picture for particulate number emissions factors with PN levels typically on the order of 3.01×10^{10}#/km (min: 2.03×10^{9}#/km /max: 9.12×10^{10}#/km) during both

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highway and urban/suburban driving conditions. However, during DPF regeneration events as observed during route portions 2, 7, and 13 PN emissions factors increase by 2 to 3 orders of magnitude to 2.08×10^{13}#/km $\pm 1.36 \times 10^{10}$#/km ($\pm 1\sigma$, including only PN for portions 7 and 13), thereby, exceeding the Euro 5b/b+ PN standard by more than an order of magnitude (factor 35).

Previous studies [32 and 33] have shown that particle number concentrations downstream the PM trap can momentarily increase during, and within a limited time period after, experiencing a regeneration event. During regeneration of a wall-flow type DPF the '*cake-layer,*' as referred to the soot layer deposited on top of the filter substrate and responsible for the high particle retention efficiency of wall-flow type DPF's (>99%), is partially oxidized, thus, momentarily reducing the filtration efficiency of the DPF [32]. Within a usually short, but ultimately depending on engine load, period after the regeneration event the '*cake-layer*' will be built up again and the DPF will resume its maximum filtration efficiency.

A more detailed discussion of DPF regeneration events and the frequency of their occurrence as observed for *Vehicle B* is presented in Section 4.3.2.

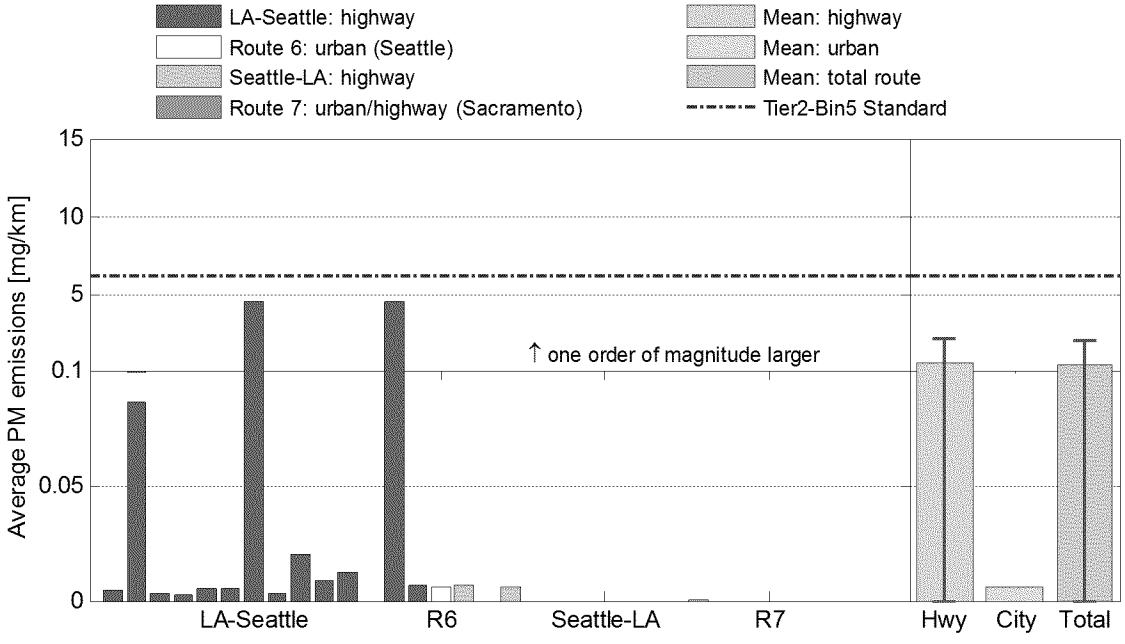

Figure 4.23: Average PM emissions of test vehicle over cross-multi-state driving route portions compared to US-EPA Tier2-Bin5 emissions standard; repeat test variations are presented as ±1σ

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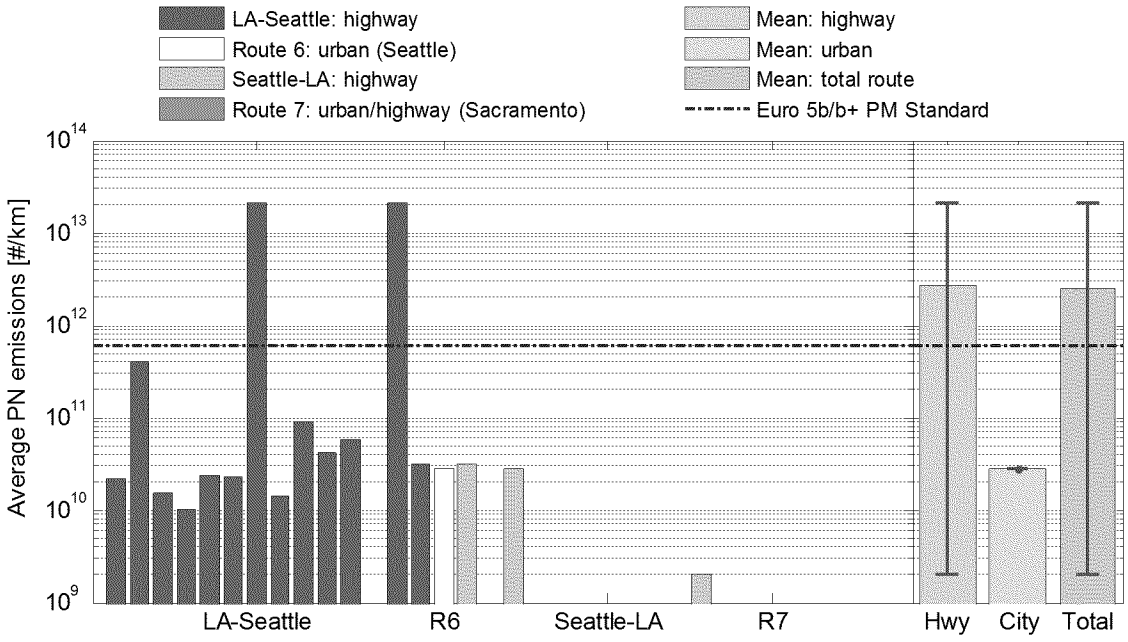

Figure 4.24: Average PN emissions of test vehicle over cross-multi-state driving route portions compared to Euro 5b/b+ emissions standard; repeat test variations are presented as minimum/maximum test value, total city emissions are only based on Route 6 (R6)

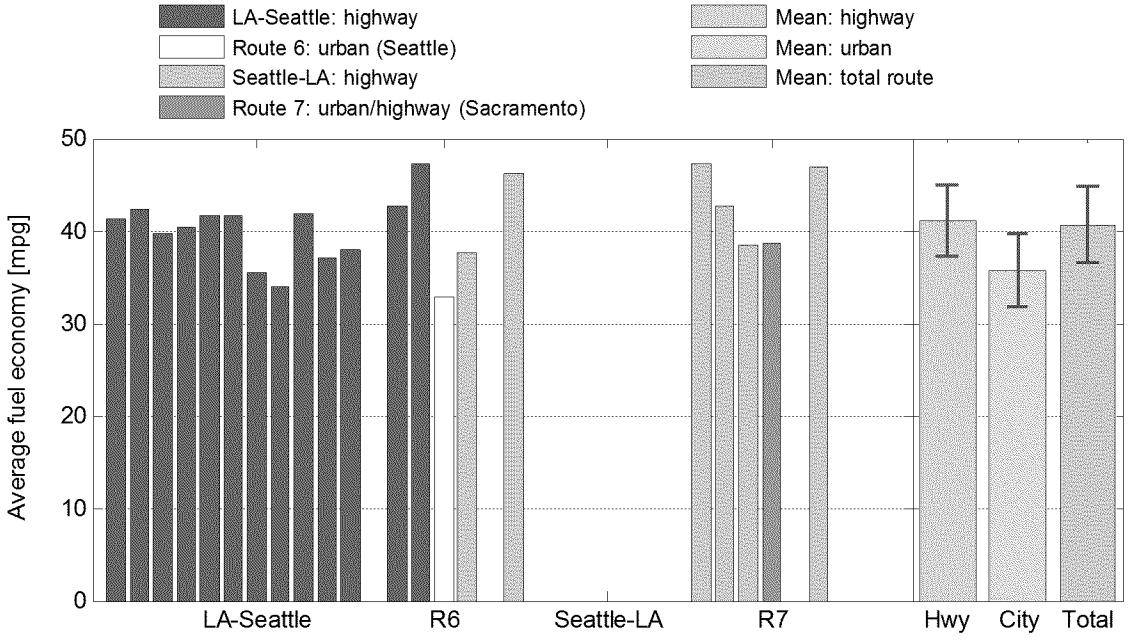

Figure 4.25: Average fuel economy of test vehicle over cross-multi-state driving route portions expressed as mpg; repeat test variations are presented as ±1σ

Finally, Figure 4.25 shows average fuel economy values in units of [mpg] for the entire

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cross-multi state driving route. On average, fuel economy was 41.2mpg ±3.9mpg (±1σ) during highway driving conditions, spanning from 33.98mpg to 47.2mpg during route portions 8 and 26, respectively. Lowest fuel economy coincides with uphill driving, whereas highest fuel economy values were observed during downhill slopes while crossing the mountain ranges in Northern California/Southern Oregon (see Figure 3.18 for altitude reference). Furthermore, urban/suburban driving (i.e. Route 6) has been shown to result in ~20% reduced fuel economy over highway driving.

4.2 On-Road NO_x Emissions

This chapter will present NO_x emissions calculated based on the averaging window method over pre-defined test routes for all three vehicles (see Section 4.2.1) and over the cross-multi state driving route for *Vehicle B* (see Section 4.2.2).

The averaging windows were calculated following recommendations outlined in the European regulation [3] with the total mass of CO_2 in [g], emitted over a given vehicle certification chassis dynamometer cycle chosen as the reference criterion to determine window size. Two reference cycles were chosen, namely, FTP-75 and NEDC as actual CO_2 emissions data was available for both these cycles from *Vehicle A* and *B*, collected during chassis dynamometer testing at CARB's El Monte facility. Table 4.9 lists the respective CO_2 mass emissions emitted over the reference cycles. No actual CO_2 emissions data were available for *Vehicle C*, therefore, CO_2 values were instead taken from EPA certification documents for the FTP-75 cycle.

Additionally, averaging window based NO_x emissions will be presented as deviation ratios from the US-EPA Tier2-Bin5 standard for NO_x (i.e. 0.043g/km) as described by Equation 11.

Table 4.9: Window size criterion for AWM; total CO_2 mass over FTP-75 and NEDC (evaluated at CARB El Monte chassis dynamometer laboratory for Vehicle A and B; taken from EPA certification document for Vehicle C)

Vehicle	CO_2 over FTP-75 [g]	CO_2 over NEDC [g]
Vehicle A	2921.9	1938.6
Vehicle B	2944.8	1841.8
Vehicle C	5042.5	5042.5 [1)]

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[1] *CO_2 mass value for FTP-75 according to EPA certification documents from http://www.epa.gov/otaq/crttst.htm*

4.2.1 NO_x Emissions over Pre-Defined Test Routes

Cumulative frequency plots for averaging window NO_x emissions in [g/km] and deviation ratios from the regulatory standard are presented for *Vehicle A* in Figure 4.26 along with Figure 4.27, for *Vehicle B* in Figure 4.28 along with Figure 4.29, and finally for *Vehicle C* in Figure 4.30 along with Figure 4.31, respectively. Total CO_2 emitted over the NEDC was chosen as reference value for calculating AWM-NO_x emissions results presented in the above mentioned figures. Overall, the LNT equipped *Vehicle A* shows the highest, while the urea-SCR after-treatment based *Vehicle C* the lowest NO_x emissions.

In general, highway driving (i.e. Route 1) shows lowest NO_x emissions whereas rural-up/downhill driving conditions (i.e. Route 3) contribute to the largest amounts of NO_x observed. For *Vehicles A* and *B*, about 30-40% of the NO_x emissions emitted during Route 3 are below levels observed for urban driving and close to what was seen for highway conditions. Contrarily, *Vehicle C* emitted significantly more NO_x during the rural-up/downhill route as compared to any of the other urban or highway routes (see Figure 4.30), with about 50% of the emissions released exceeding ~10 times the UA-EPA Tier2-Bin5 standard. This agrees well with route average NO_x emissions presented earlier in Figure 4.1 and Figure 4.2. However, when comparing results for Route 3 between *Vehicles C* and *B* (see Figure 4.30 vs. Figure 4.28), close similarities in shape and magnitude can be noticed for the cumulative frequencies. The large increase in NO_x emissions observed during the rural-up/downhill driving over other test routes could be attributed to the fact that the emissions presented herein are normalized for distance traveled rather total work produced by the engine. This impacts results from heavier vehicles (*Vehicle C* was ~54% heavier than *Vehicles A* and *B*) with larger and more powerful engines while operating over routes comprising increased altitude changes since proportionally more work needs to be done by the engine to move the vehicle uphill over a finite increment of distance.

The impact of DPF regenerations onto NO_x emissions is especially pronounced for *Vehicle A*, visible as significant differences in cumulative frequency graphs between repetitions of routes with and without regeneration event (i.e. Route 1, 3, and 4). It has to be noted that this

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observation might be confounded for Route 1 as the test exhibiting the DPF regeneration event was also experiencing heavy evening rush-hour traffic conditions, thereby additionally affecting NO_x emissions. However, owing the increased difference between both test runs for Route 1, as compared to the differences seen between test runs for Route 3 and 4, it could be justified as a combined effect of DPF regeneration and increased stop-go conditions due to rush-hour traffic. Figure 4.34 shows a direct comparison of continuous averaging window NO_x emission over Route 3 between two repeats, one with (i.e. Test 1) an the other without (i.e. Test 2) DPF regeneration event. The location of the regeneration event can be identified from the PN concentration and exhaust gas temperature (measured at the exhaust tailpipe outlet) graphs in the lower part of Figure 4.34, with the duration of the event observed to be on the order of 14min and thereby in agreement with [31]. During regeneration events averaging window NO_x emissions are found to nearly double from ~3g/km to ~5.5g/km for Route 3 for example (see Figure 4.34). Similar behavior was observed for Routes 1 and 4 for *Vehicle A* between tests with and without DPF regeneration. A possible explanation for the observed increase in NO_x emissions during DPF regeneration events for the LNT equipped *Vehicle A* was given earlier in Section 4.1.1. This distinct impact of DPF regenerations onto NO_x emissions was not observed for the other test vehicles.

In general for *Vehicle A*, 50% of NO_x emissions over all test routes were exceeding the US-EPA Tier2-Bin5 standard by a factor of 20 to 40 as seen from Figure 4.27, with none of the routes exhibiting NO_x emissions at levels below the regulatory standard. On the other hand, for *Vehicle B* 50% of the NO_x emissions were observed to exceed the US-EPA Tier2-Bin5 standard by 5 to 20 times for the majority of the test routes. One repeat of Route 1 exhibited lower NO_x emissions with 5% of total accumulated averaging window NO_x observed to fall below the standard.

Finally, as seen from Figure 4.30 and Figure 4.31 *Vehicle C* presents a vastly different averaging window NO_x emissions pattern compared to *Vehicles A* and *B*, with the majority of the highway and urban/suburban driving routes exhibiting 80 to 90% of NO_x emissions below the US-EPA Tier2-Bin5 standard. Figure 4.32 and Figure 4.33 provide a zoomed in view of the x-axis for Figure 4.30 and Figure 4.31, respectively. A significant variability in magnitude of NO_x emissions between repetitions of the urban routes (i.e. Routes 2 and 5) can be noticed from

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Figure 4.32. Possible explanations for the observed test-to-test variability include changing traffic patterns and driving style as test drivers were changed between repeats of a given test route. Indeed, one of the tests for Route 5 was ~16min shorter and encountered more aggressive vehicle accelerations, possibly partially causing the observed increase in NO_x emissions.

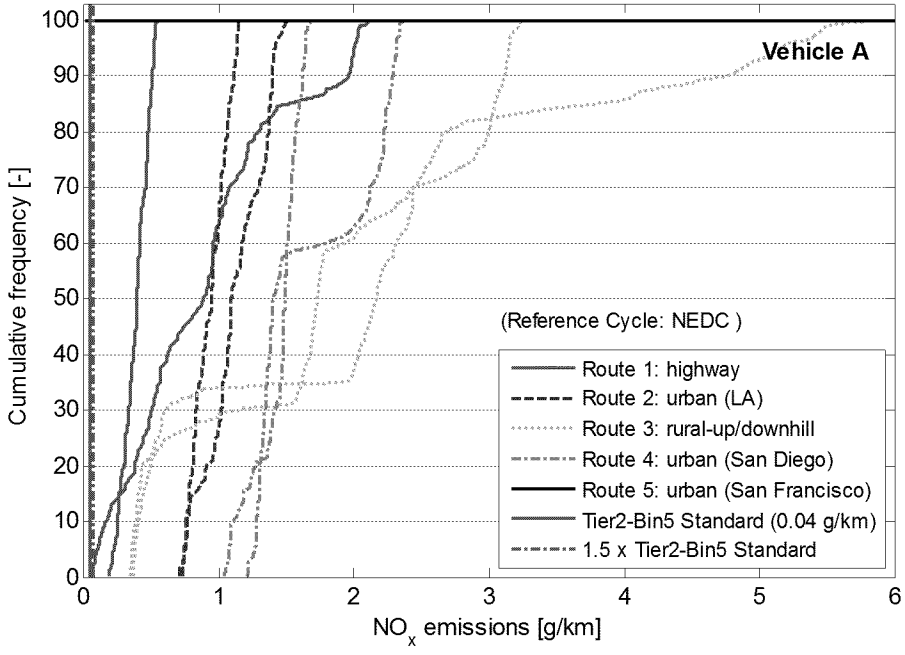

Figure 4.26: Averaging window NO_x emissions for Vehicle A over the five test routes compared to US-EPA Tier2-Bin5 emissions standard; AWM reference metric is CO_2 emissions over NEDC; Route 1 includes rush-hour/non rush-hour driving

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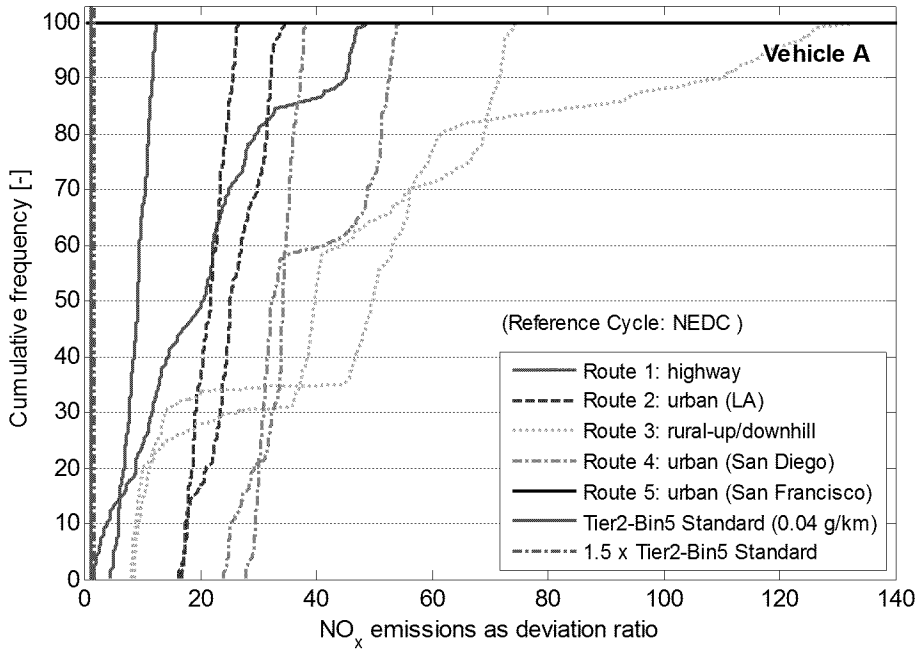

Figure 4.27: Averaging window NO_x emissions for Vehicle A over the five test routes expressed as deviation ratio; AWM reference metric is CO_2 emissions over NEDC; Route 1 includes rush-hour/non rush-hour driving

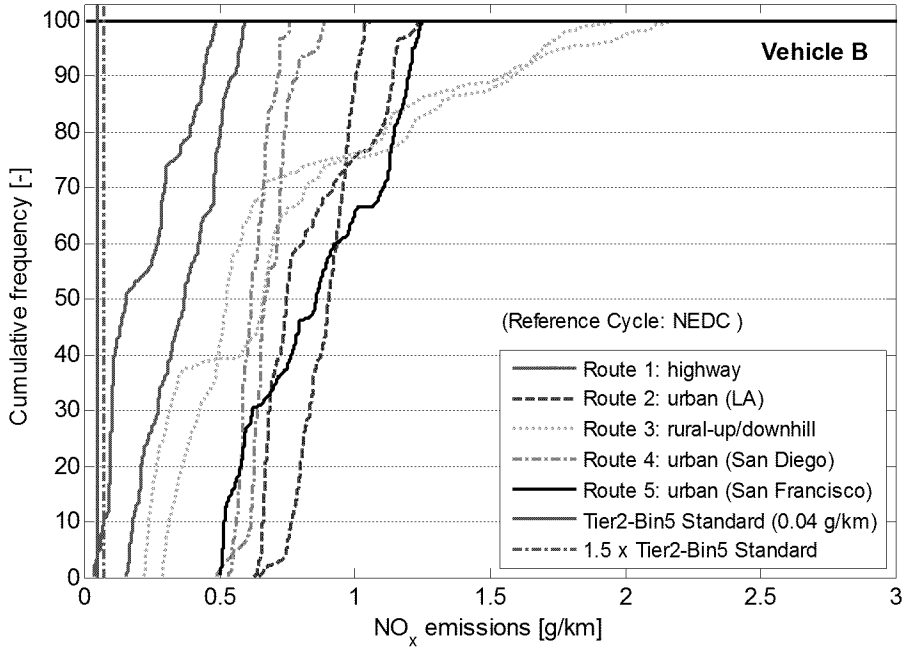

Figure 4.28: Averaging window NO_x emissions for Vehicle B over the five test routes compared to US-EPA Tier2-Bin5 emissions standard; AWM reference metric is CO_2 emissions over NEDC

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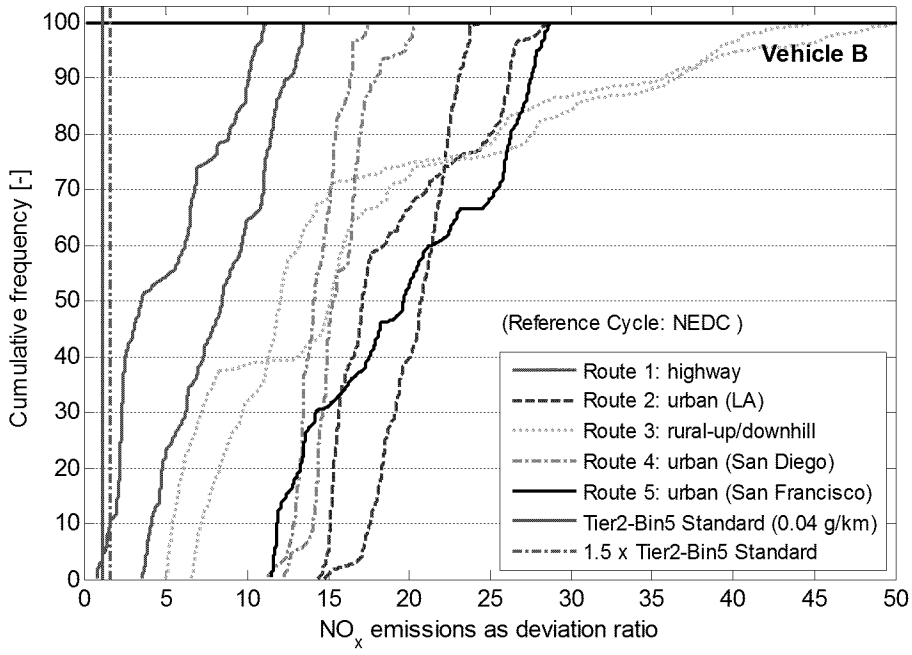

Figure 4.29: Averaging window NO_x emissions for Vehicle B over the five test routes expressed as deviation ratio; AWM reference metric is CO_2 emissions over NEDC

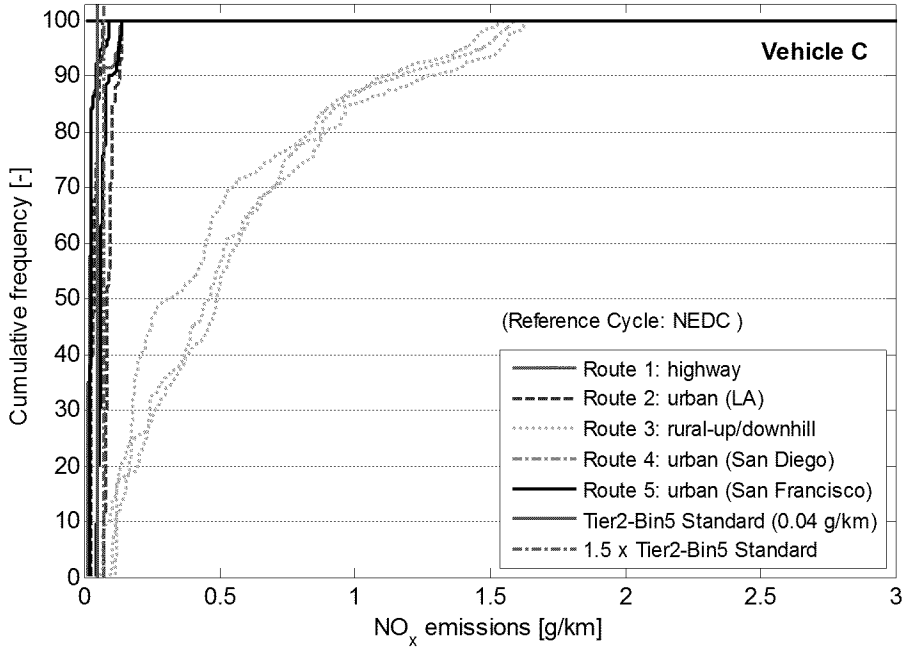

Figure 4.30: Averaging window NO_x emissions for Vehicle C over the five test routes compared to US-EPA Tier2-Bin5 emissions standard; AWM reference metric is CO_2 emissions over NEDC

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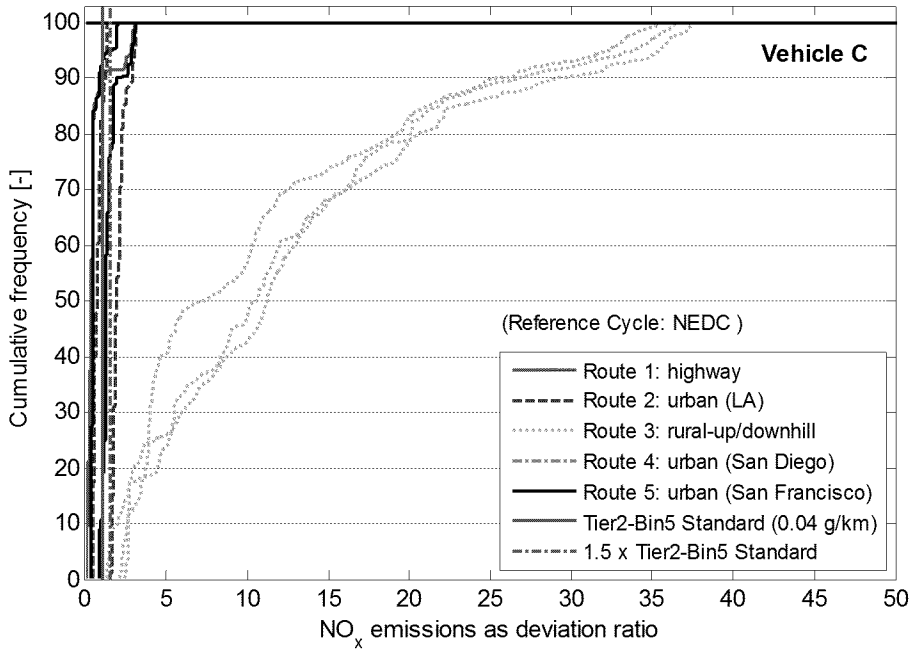

Figure 4.31: Averaging window NO_x emissions for Vehicle C over the five test routes expressed as deviation ratio; AWM reference metric is CO_2 emissions over NEDC

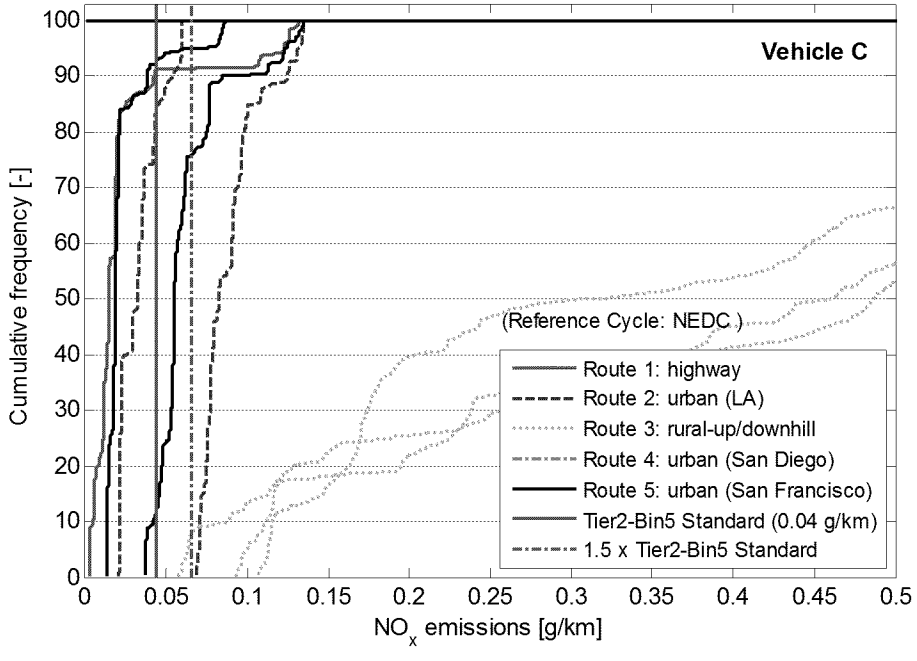

Figure 4.32: Zoomed x-axis of Figure 4.30 showing averaging window NO_x emissions for Vehicle C over the five test routes compared to US-EPA Tier2-Bin5 emissions standard

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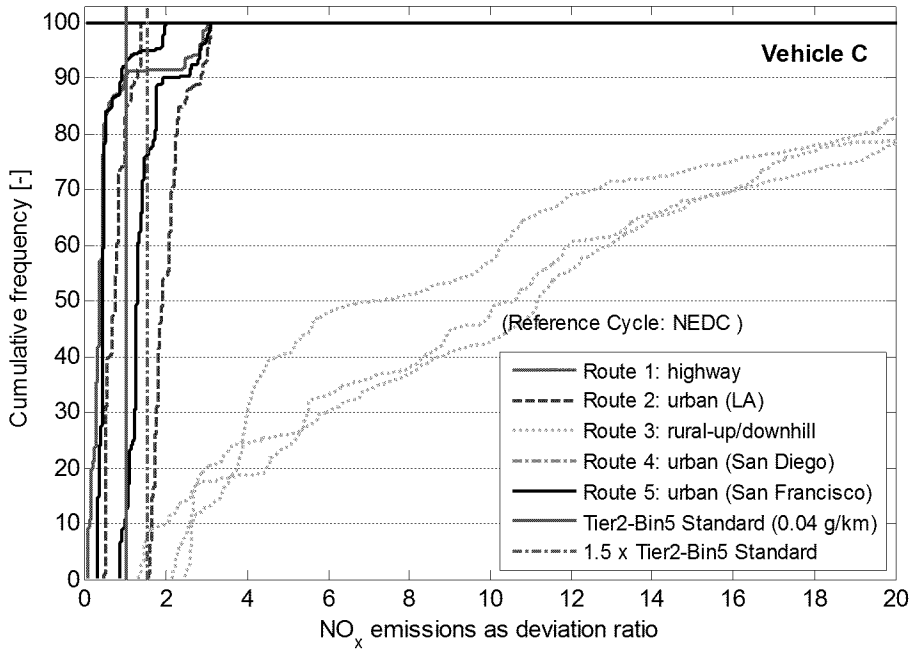

Figure 4.33: Zoomed x-axis of Figure 4.31 showing averaging window NO_x emissions for Vehicle C over the five test routes expressed as deviation ratio

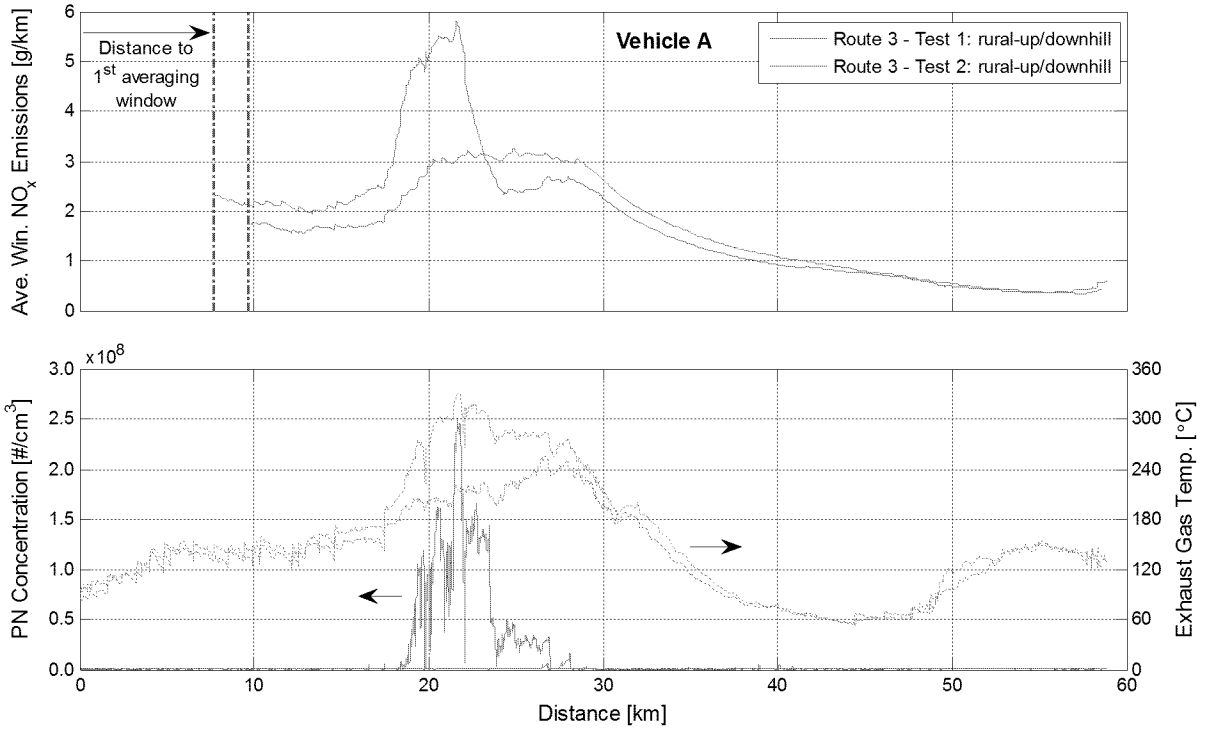

Figure 4.34: *a*) Continuous averaging window NO_x emissions, and *b*) particle number concentrations and exhaust gas temperatures (at exhaust tip) vs. distance for Route 3; test 1 with

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and test 2without DPF regeneration

Figure 4.35 through Figure 4.38 depict cumulative frequencies for averaging window NO_x emissions along with their deviation ratios from the US-EPA Tier2-Bin5 NO_x standard over the five pre-defined test routes, similarly to Figure 4.26 through Figure 4.33, however, with mass of CO_2 emitted over the FTP-75 cycle selected as window size threshold value (see Table 4.9).

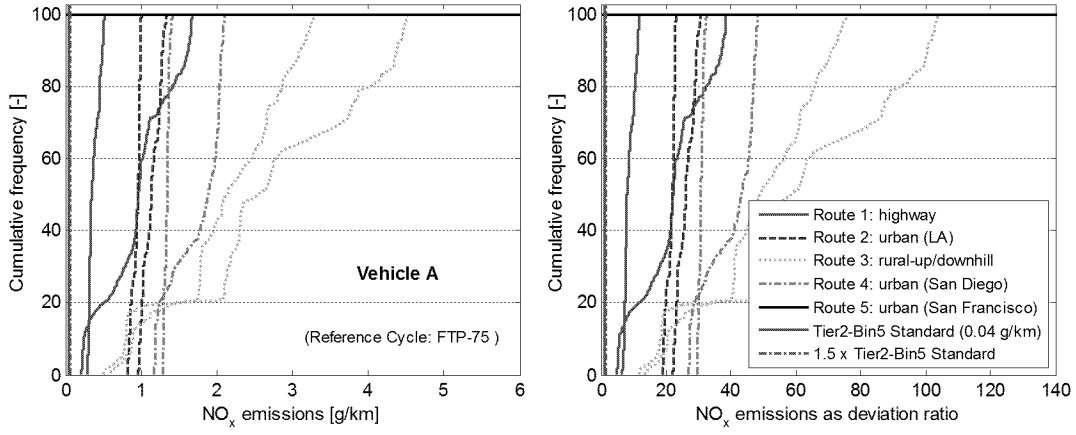

Figure 4.35: Averaging window NO_x emissions for Vehicle A over the five test routes compared to US-EPA Tier2-Bin5 emissions standard (*left*) and expressed as deviation ratio (*right*); AWM reference metric is CO_2 emissions over FTP-75; Route 1 includes rush-hour/non rush-hour driving

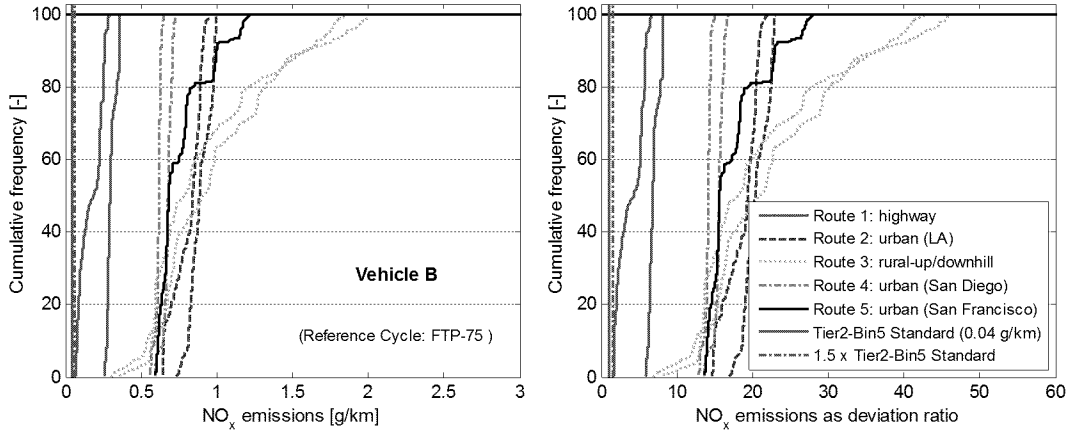

Figure 4.36: Averaging window NO_x emissions for Vehicle B over the five test routes compared to US-EPA Tier2-Bin5 emissions standard (*left*) and expressed as deviation ratio (*right*); AWM reference metric is CO_2 emissions over FTP-75

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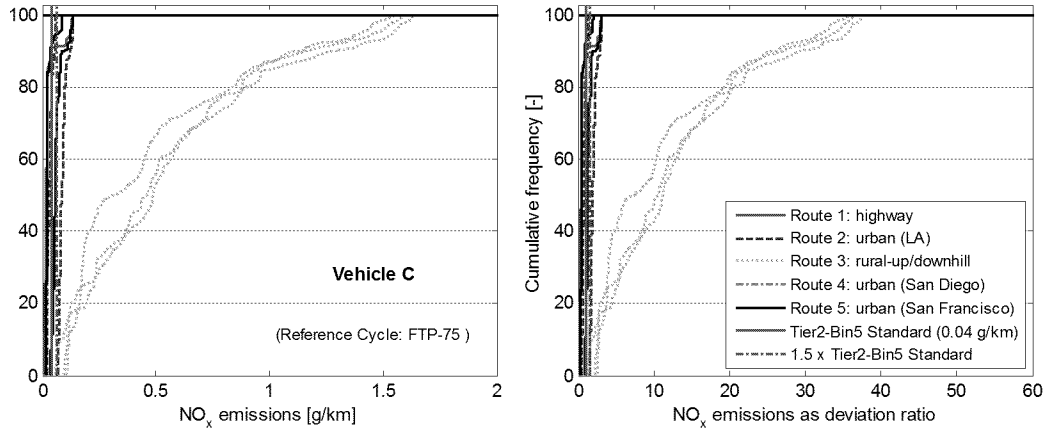

Figure 4.37: Averaging window NO_x emissions for Vehicle C over the five test routes compared to US-EPA Tier2-Bin5 emissions standard (*left*) and expressed as deviation ratio (*right*); AWM reference metric is CO_2 emissions over FTP-75

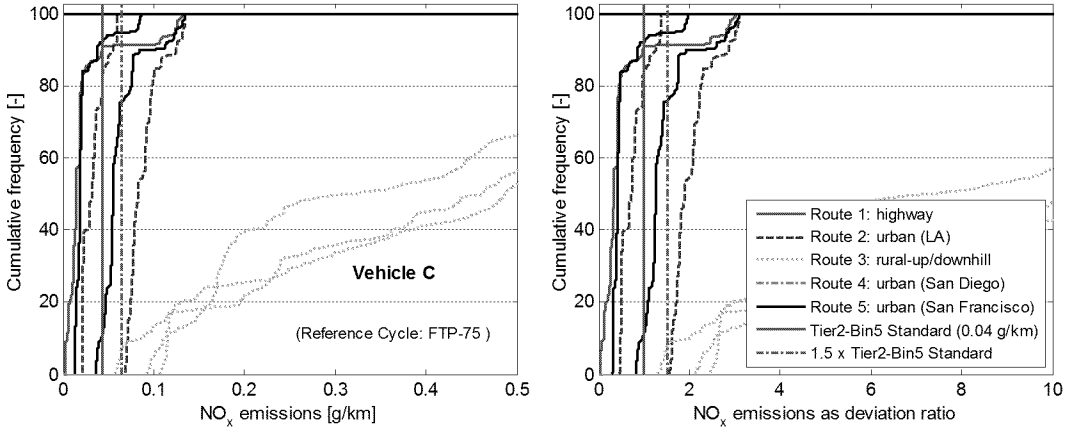

Figure 4.38: Zoomed x-axis of Figure 4.37 showing averaging window NO_x emissions for Vehicle C over the five test routes compared to US-EPA Tier2-Bin5 emissions standard (*left*) and expressed as deviation ratio (*right*)

Figure 4.39 presents frequency distributions of exhaust gas temperatures for *Vehicles A* and *B* over two repeats of test Routes 1 through 4. These temperature distributions reflect exhaust gas temperatures measured by vehicle sensors (broadcasted via ECU CAN) downstream the DPF and upstream the $deNO_x$ after-treatment devices for *Vehicle A* and *B*, respectively.

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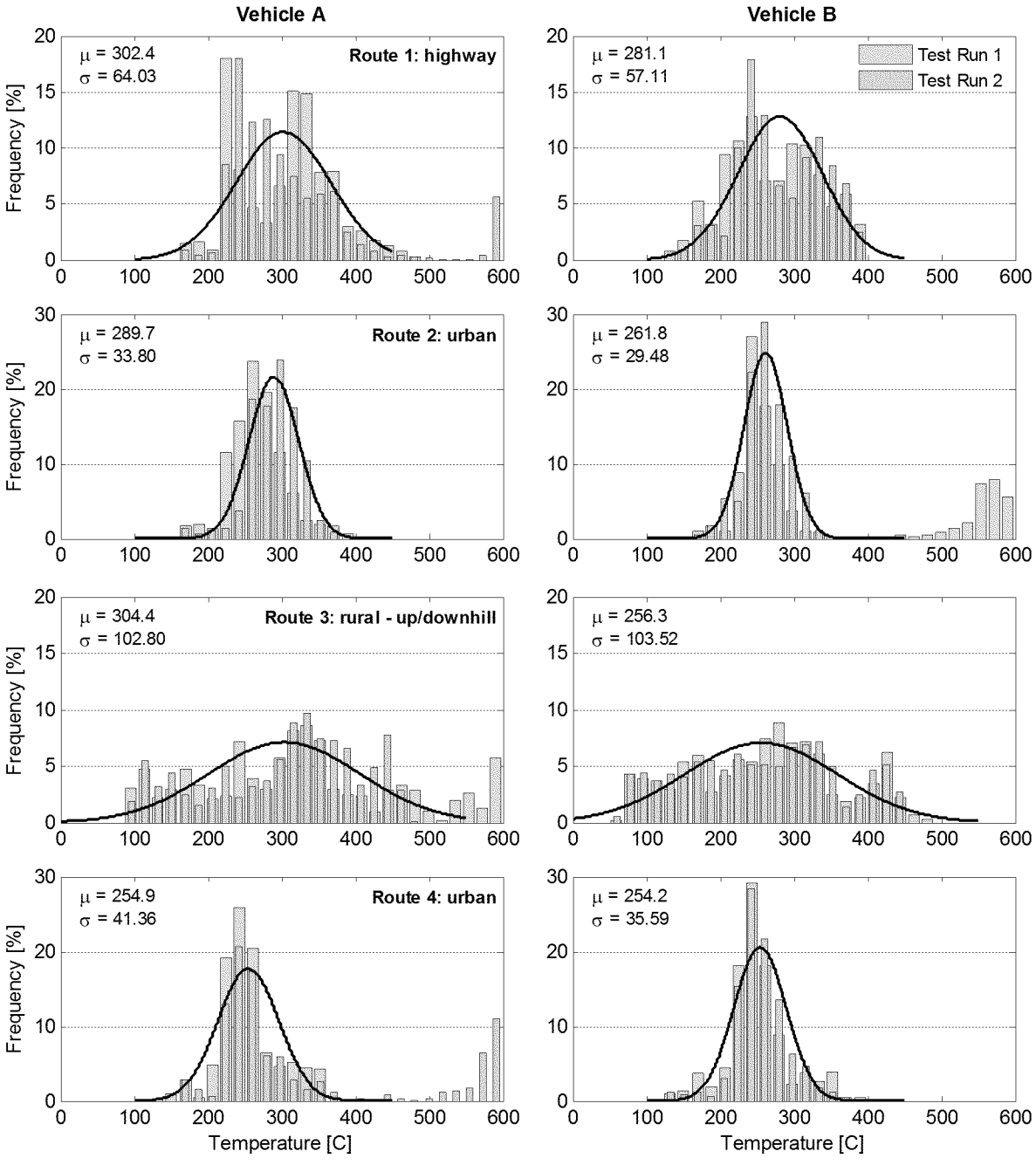

Figure 4.39: Frequency distributions of exhaust gas temperatures at downstream DPF location for Vehicle A and B over Routes 1 through 4 with two repeats; data fitted by normal distribution (not including data for high temperature excursions during DPF regeneration events)

Each temperature dataset is fitted by a normal distribution curve (bold dark line) which does not include any data points from the high temperature excursions observed for Vehicle A, Routes 1, 3, and 4 as well as for Vehicle B, Route 2 (see Figure 4.39). A distinct temperature

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distribution pattern can be noticed as a function of different driving conditions, namely, highway (i.e. Route 1), urban/suburban (i.e. Routes 2, 4), and rural-up/downhill (i.e. Route 3). Urban/suburban driving was found to exhibit narrow temperature distributions centered (μ) around 255 to 280°C with a spread (σ) of 30 to 40°C, whereas highway driving conditions led to increased mean exhaust temperatures (μ = 280 to 300°C) owing to the elevated engine loads associated with high-speed driving, as well as a distinctively wider spread of the temperature distribution (σ = 57 to 64°C). On the other hand, rural-up/downhill driving was observed to exhibit a relatively large range of varying exhaust gas temperatures with the majority of values falling between 100 and 500°C (μ = 255 to 300°C, $\sigma \approx$ 103°C). This is due to the particular characteristics of the test route (i.e. Route 3) that follows on the exact same street up and downhill to a turning point, leading to i) high exhaust temperature conditions during the uphill portion caused by increased engine load demand, and ii) low exhaust temperature conditions during the downhill portion where the vehicle predominantly coasts with fueling cut-off, thereby, effectively transforming the engine to an '*air-pump,*' pumping intake air at ambient temperatures through the engine and after-treatment system cooling its components (e.g. catalysts) down.

Route 1 - test 2, Route 3 - test 1, Route 4 - test 2 for *Vehicle A* as well as Route 2 - test 1 for *Vehicle B* show a distinct second mode in the upper temperature range centered around 600°C. The observed increase in exhaust gas temperature is due to DPF regeneration events occurring during some of the test runs, where elevated temperatures are required to initiate the periodic soot oxidation from the surface of the filter substrate.

4.2.2 NO_x Emissions over Cross-Multi-State Driving Route

This section presents cumulative frequency plots for averaging window NO_x emissions in Figure 4.40 (Zoom-in to x-axis shown in Figure 4.42) along with deviation ratios from the US-EPA Tier2-Bin5 standard for NO_x (at full useful life) in Figure 4.41 for *Vehicle B* over individual portions of the cross-multi state driving route with total CO_2 emitted over the NEDC (see Table 4.9) chosen as reference value for calculating averaging window size.

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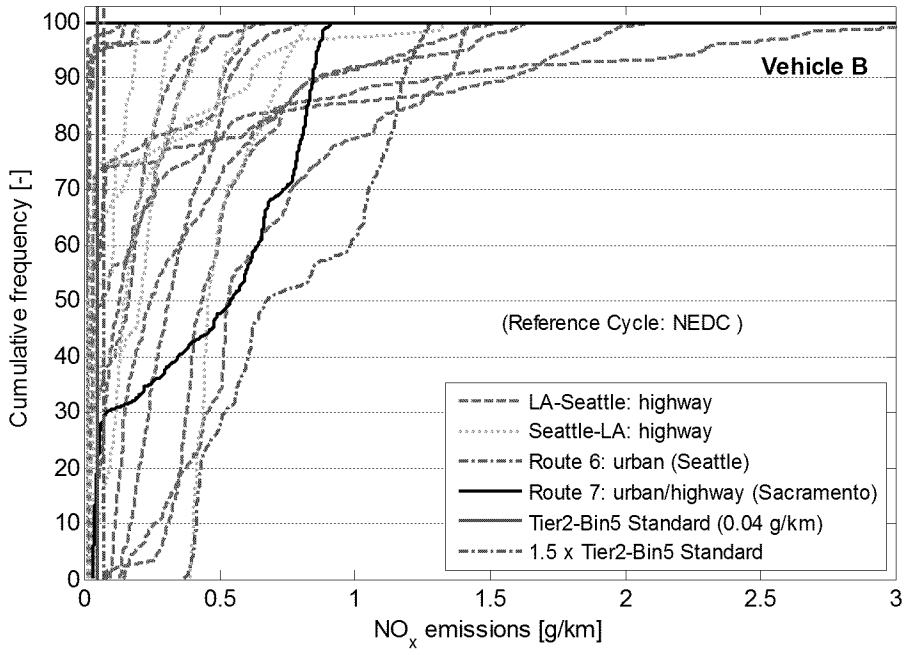

Figure 4.40: Averaging window NO_x emissions for Vehicle B over cross-multi-state driving route portions compared to US-EPA Tier2-Bin5 emissions standard; AWM reference metric is CO_2 emissions over NEDC

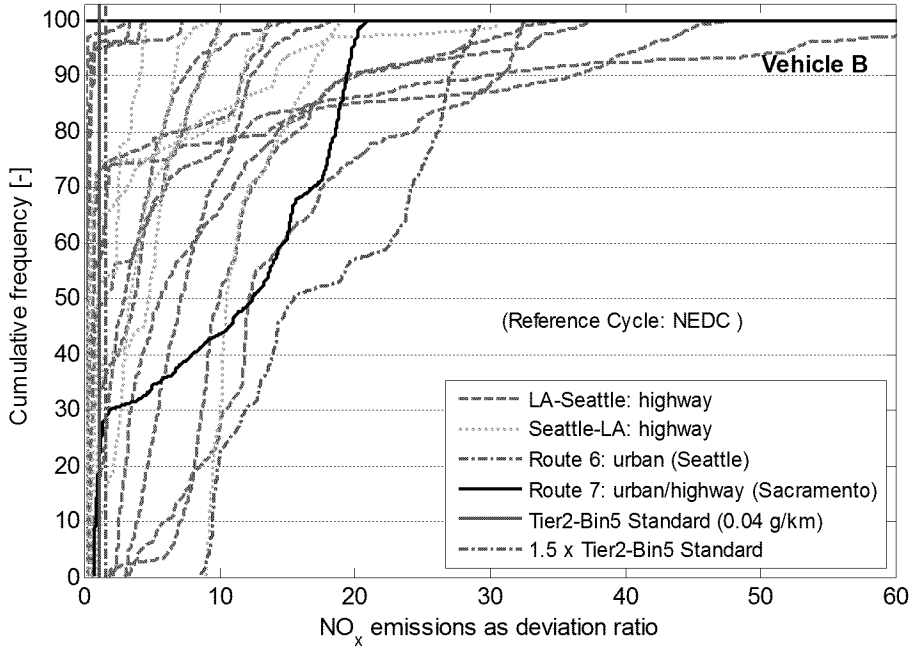

Figure 4.41: Averaging window NO_x emissions for Vehicle B over cross-multi-state driving route portions expressed as deviation ratio; AWM reference metric is CO_2 emissions over NEDC

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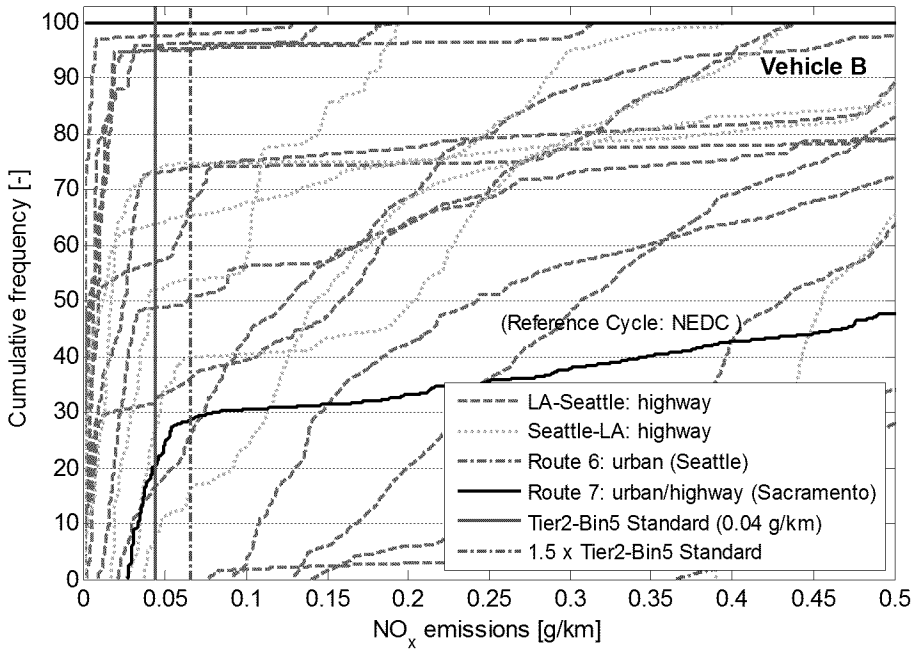

Figure 4.42: Zoomed x-axis of Figure 4.40 showing averaging window NO_x emissions for Vehicle B over cross-multi-state driving route portions compared to US-EPA Tier2-Bin5 emissions standard

Overall, cumulative frequencies of averaging window NO_x emissions over the majority of individual portions of the cross-multi state driving route agree with results seen from the pre-defined test routes (see Figure 4.28) for *Vehicle B*. It can be noticed that 50% of NO_x emissions during urban/suburban driving conditions (i.e. Routes 6 and 7) exceed the applicable standard by more than a factor of 10, similar to what was observed over urban Routes 2, 4, and 5. Route 7 exhibits a distinct change in NO_x emissions as can be seen from Figure 4.42 (dark filled line). This is due to a significant portion of highway driving (> 60% by distance) contained in this route which accounts for ~20% of NO_x emissions to be below the US-EPA Tier2-Bin5 standard whereas the smaller portion of the route (< 40% by distance) accounts for significantly increased NO_x levels with 50% of the emissions deviating by 10 to 20 times from the standard.

On the other hand, Figure 4.42 also shows that under particular conditions, *Vehicle B* was observed to have NO_x emissions well below the US-EPA Tier2-Bin5 level, specifically with route portions 3, 4, 5, and 6 exhibiting ~95% of NO_x emissions below the regulatory standard.

It is worthy to mention that DPF regeneration events did not seem to noticeably affect NO_x emissions from the urea-SCR based *Vehicle B* in the same manner as they were observed to influence NO_x emissions rates from the LNT equipped *Vehicle A*.

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4.3 On-Road Particle Number and Mass Emissions

This section will present and discuss particulate number and mass emissions concentrations over the pre-defined test routes for *Vehicles A* and *B* in Section 4.3.1 as well as over the cross-multi state driving route for *Vehicle B* in Section 4.3.2. It has to be noted that all PN and PM emissions concentrations presented herein are inferred from real-time particle measurements using a charge-type particle sensor (i.e. Pegasor particle sensor).

4.3.1 PN Emissions over Pre-Defined Test Routes

Figure 4.43 through Figure 4.50 present comparisons of raw particle number concentrations in units [#/cm^3] between two consecutive test runs for Routes 1 through 4 and *Vehicles A* and *B* plotted against driving distance. It has to be noted that for the purpose of this comparison PN concentrations reflect raw particle concentrations in the exhaust stream per unit volume (i.e. cm^3) and not total number of particles released from the engine which one could obtain by multiplying average PN concentration into total exhaust flow. Exhaust gas temperatures, as measured at the exhaust sample extraction point (i.e. at outlet of exhaust tip), are plotted along with PN concentrations to aid in identifying possible DPF regeneration events. To the right side of each continuous PN concentration and exhaust temperature graph is a bar chart providing PN emissions factors in [#/km] for each individual test (i.e. repetition of a given route) corresponding to PN results already presented in Figure 4.11 during Section 4.1.1.

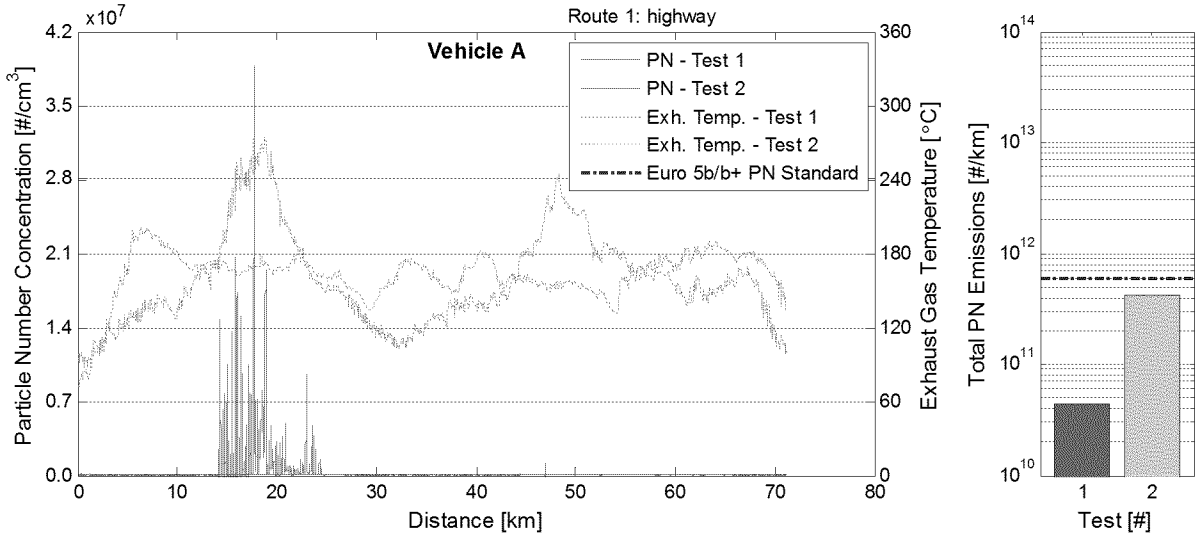

Figure 4.43: Comparison of particle number concentrations between two tests of Route 1 for Vehicle A, DPF regeneration event during test 2

Figure 4.43 and Figure 4.44 present PN emissions concentrations during highway driving (i.e. Route 1) for *Vehicles A* and *B*, respectively. *Vehicle A* can be noticed to have experienced a moderate DPF regeneration event between 15 and 25km into the test route leading to an order of magnitude increase in PN emissions factor for test 2 as compared to test 1. However, the observed regeneration event did not cause PN emission to exceed the Euro 5b/b+ PN standard. No DPF regeneration event is seen for *Vehicle B* during highway operation over Route 1.

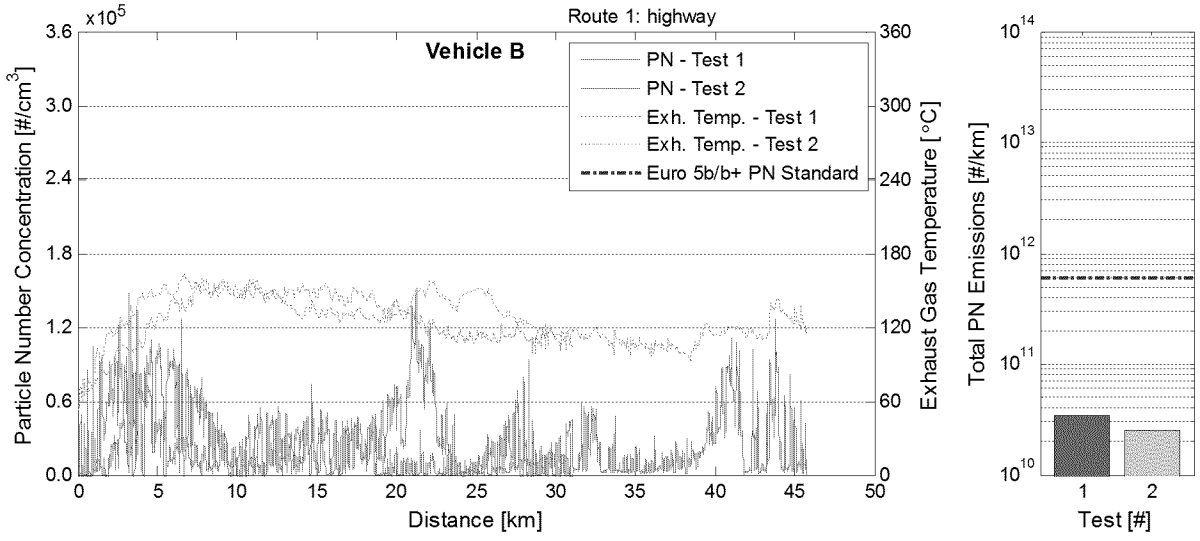

Figure 4.44: Comparison of particle number concentrations between two tests of Route 1 for Vehicle B, No DPF regeneration event observed

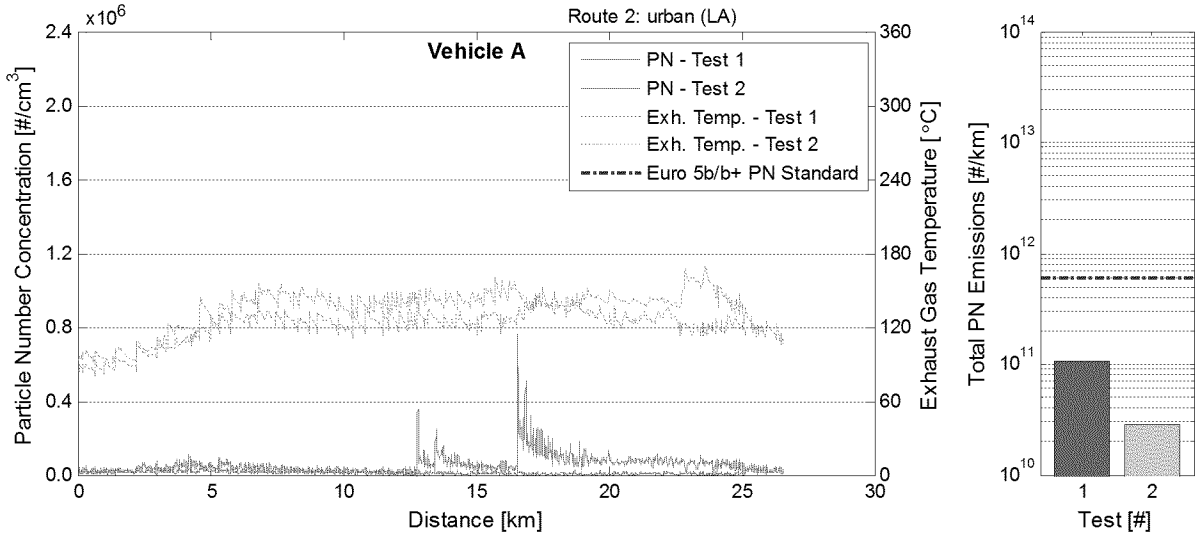

Figure 4.45: Comparison of particle number concentrations between two tests of Route 2 for Vehicle A, No DPF regeneration event observed

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Figure 4.45 and Figure 4.46 show PN emissions concentrations during Route 2 for *Vehicles A* and *B*, respectively. Contrary to Route 1, during Route 2 driving *Vehicle B* exhibits a DPF regeneration event during the second half of the first test run as recognizable from either the significantly increased PN concentrations (> 2 orders of magnitude) or the increase in exhaust gas temperature by a factor of 2 when compared to test run 2 which lacks a regeneration event. Furthermore, the DPF regeneration event resulted in the PN emissions factor exceeding the applicable PN standard by an order of magnitude (i.e. 5.51×10^{12}#/km vs. 6.0×10^{11}#/km).

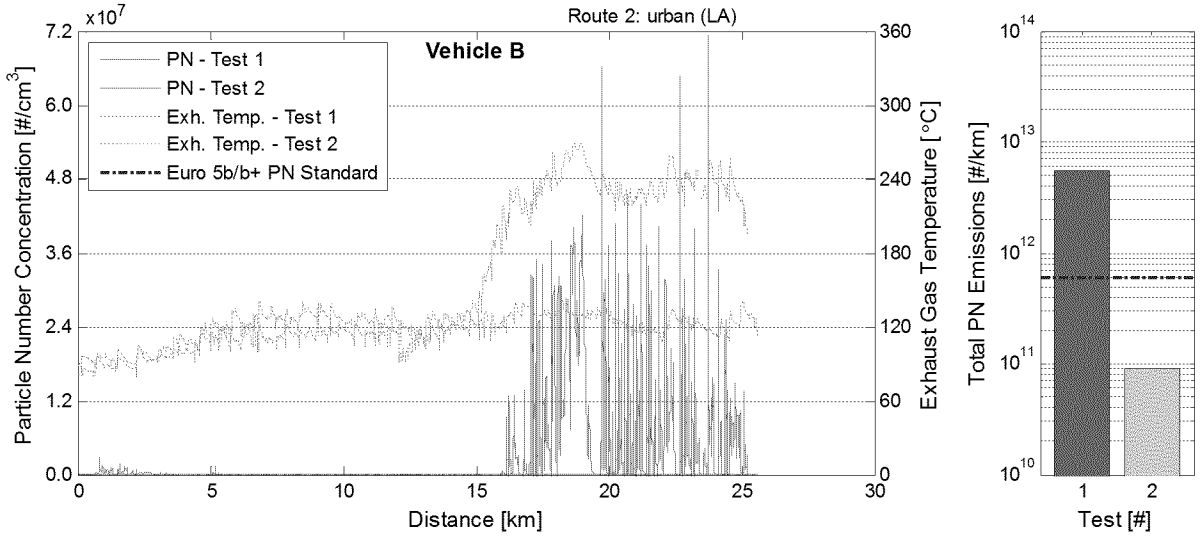

Figure 4.46: Comparison of particle number concentrations between two tests of Route 2 for Vehicle B, DPF regeneration event during test 1

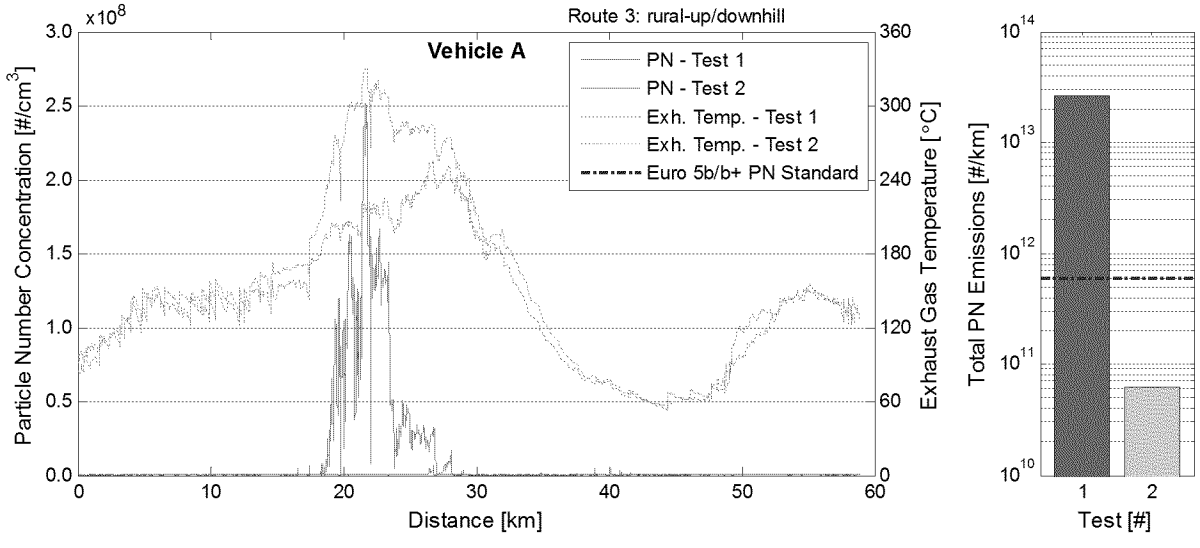

Figure 4.47: Comparison of particle number concentrations between two tests of Route 3 for Vehicle A, DPF regeneration event during test 1

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Figure 4.47 and Figure 4.48 show PN emissions concentrations during Route 3 for *Vehicles A* and *B*, respectively, with DPF regenerations noticed for both vehicles. *Vehicle A* exhibited a regeneration event during the uphill portion of the first test run (at 18 to 27km) with the PN standard being exceeded by two orders of magnitude (2.61×10^{13}#/km), whereas *Vehicle B* showed repeatable signs of moderate regeneration events at the same location for both test runs. Also, PN emissions factors for *Vehicle B* are exceeding the Euro 5b/b+ PN standard during both consecutive test runs of Route 3.

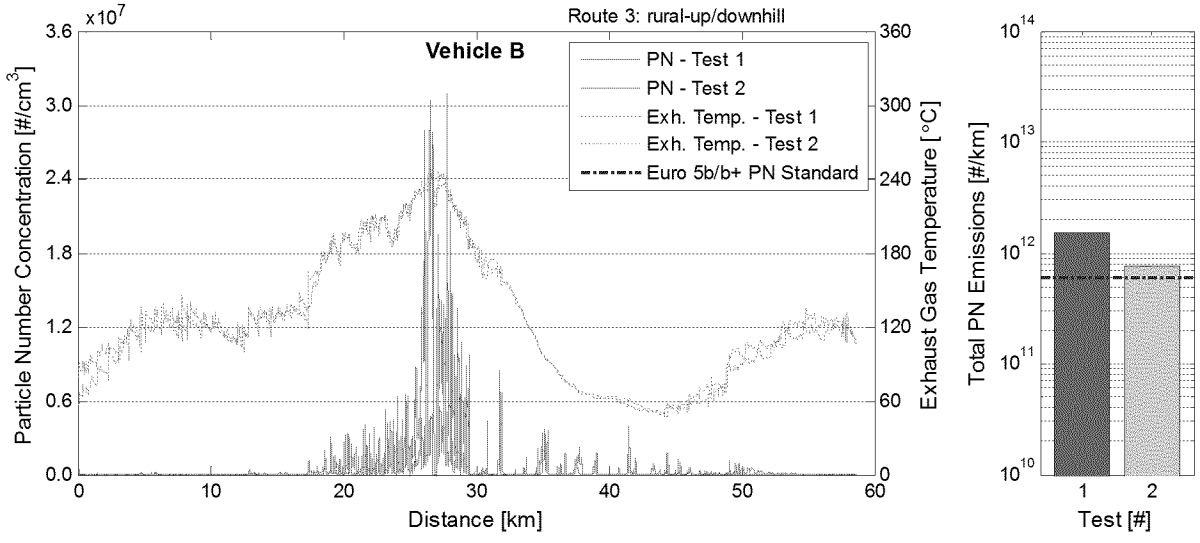

Figure 4.48: Comparison of particle number concentrations between two tests of Route 3 for Vehicle B, DPF regeneration event during both tests

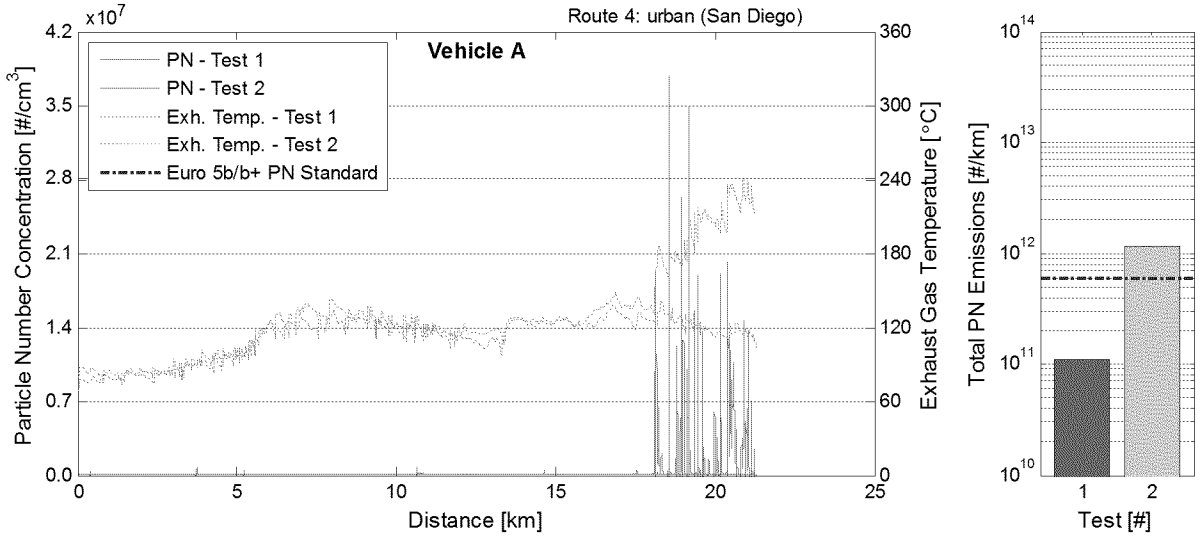

Figure 4.49: Comparison of particle number concentrations between two tests of Route 4 for Vehicle A, DPF regeneration event during test 2

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Finally, Figure 4.49 and Figure 4.50 show PN emissions concentrations during Route 4 for *Vehicles A* and *B*, respectively. While *Vehicle B* does not experience any DPF regeneration event with PN emissions factors remaining well below the regulatory standard, *Vehicle A* exhibits the onset of a regeneration event towards the end of the second repetition leading to PN emissions one order of magnitude greater than observed for the test run without event.

Additionally, it is interesting to notice that while there was no DPF regeneration event occurring exhaust gas temperatures for both vehicles show a strong similarity. This can be explained by the fact that both *Vehicles A* and *B* are equipped with an identical engine that most likely is programmed with same or at least nearly same base calibration parameters. Also, the actual vehicle test weight only differed by 29kg between *Vehicle A* and *B* leading to similar load conditions for both engines during testing.

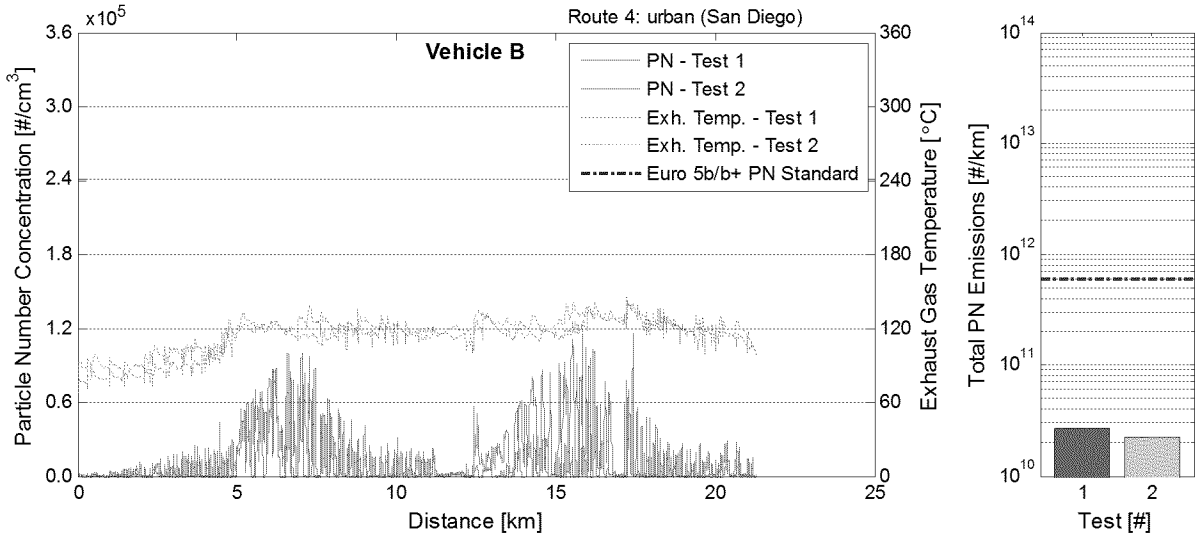

Figure 4.50: Comparison of particle number concentrations between two tests of Route 4 for Vehicle B, No DPF regeneration event observed

4.3.2 PM and PN Emissions over Cross-Multi-State Driving Route

This section presents raw particulate number and mass emissions concentrations in the exhaust stream in Figure 4.51 and Figure 4.52, respectively, for *Vehicle B* over the entire cross-multi state driving route. Four distinct DPF regeneration events can be noticed in Figure 4.51 from predominant particulate number concentration (blue line) spikes that increase by four orders of magnitude to 1.4×10^8 #/cm^3 over the typical concentration level of 2×10^4 #/cm^3. These events of drastic increase in particulate number concentrations are accompanied, as expected, by

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excursions in exhaust gas temperatures as thermal conditions of after-treatment and exhaust stream are increased in order to initiate soot oxidation on the DPF substrate. Exhaust gas temperatures were observed to increase from typical levels throughout the route of ~320°C to ~560°C during the DPF regeneration events. It has to be noted that temperatures depicted in Figure 4.51 and Figure 4.52 were measured at post SCR location by an on-board temperature sensor, acquired via ECU CAN interrogation.

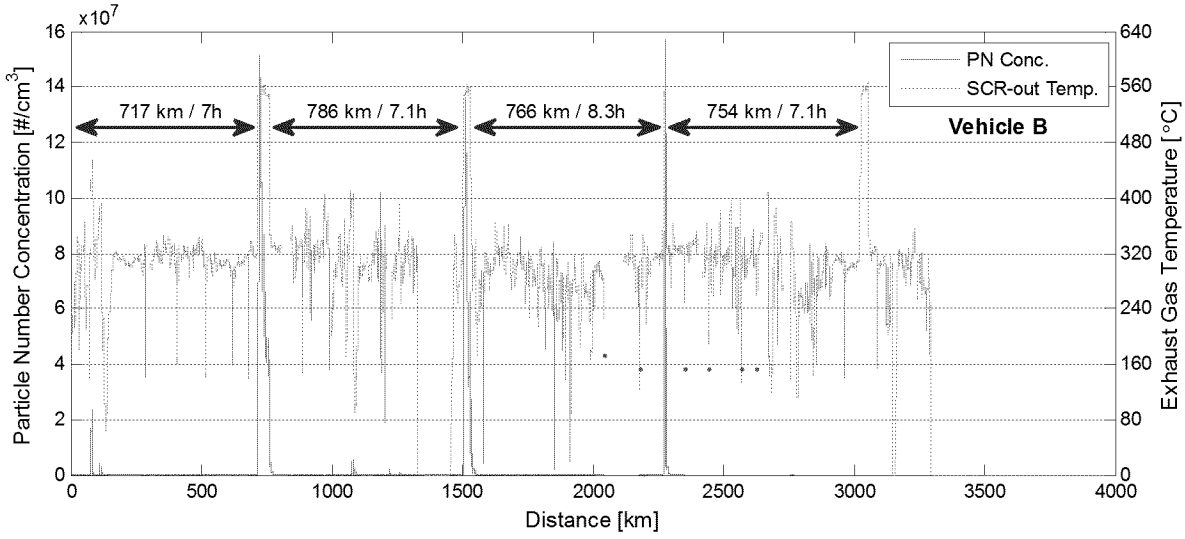

Figure 4.51: Particle number concentration and exhaust gas temperature at SCR outlet location of test vehicle over cross-multi-state driving route; Note: PN concentration spikes indicate DPF regeneration events

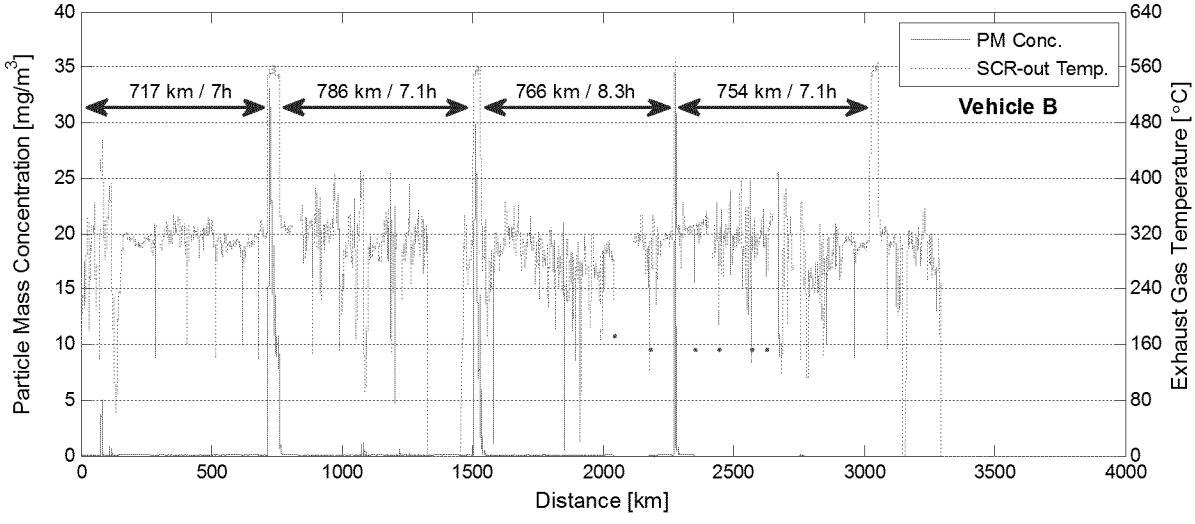

Figure 4.52: Particle mass concentration and exhaust gas temperature at SCR outlet location of test vehicle over cross-multi-state driving route; Note: PN concentration spikes indicate DPF regeneration events

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Even though four distinct exhaust gas temperature excursions can be noticed from Figure 4.51, thus indicating four DPF regeneration events throughout the entire route, only three particulate number concentration spikes are observed. This is due to the fact that the real-time particle sensor was not operational after ~2600km as the electrical air compressor providing pressurized air to the sensor had failed. However, even though lacking actual particle measurements, but solely based on the preceding data it can be concluded with the necessary confidence that the temperature excursion around 3023km is indicative of a DPF regeneration event.

It is interesting to notice from Figure 4.51 that DPF regeneration events are nearly equally spaced both on a spatial (i.e. distance traveled) and temporal (i.e. duration between event) basis as can be seen from Table 4.10. On average the vehicle traveled approximately 756km ±29km (±1σ) between individual regeneration events which was observed to correspond to ~7.07hours ±0.06hours (±1σ, not including third event) on a temporal basis. Even though the distance traveled between events 2 and 3 is of similar length than for other events, the time required was observed to be ~17% longer (7.07hours vs. 8.3hours). A possible explanation for this difference is that the route between regeneration events 2 and 3 included low vehicle speed urban/suburban driving in and around Seattle, WA, leading to increased travel time to accumulate ~756km. Overall, these results ultimately lead to conclude that DPF regeneration intervals are predominantly distance based which agrees with descriptions given for after-treatment control strategies for Vehicle A in [31] (see from Figure 12 in [31]) which are most likely similar to *Vehicle B* as well as the same engine and DPF configurations are used in both vehicles. Furthermore, the observed average duration of a DPF regeneration event was 15min ±6min (±1σ) as seen from Table 4.10, thereby in agreement with system descriptions provided in [31].

Table 4.10: Distance and time based DPF regeneration frequencies and duration for Vehicle B over cross-multi state driving route

Event [#]	Distance to event [km]	Distance based f_{regen} [km]	Time to event [hr]	Time based f_{regen} [hr]	Duration [min]
1	717	*717*	7.0	*7.0*	22.4
2	1,503	*786*	14.1	*7.1*	15.2
3	2,269	*766*	22.3	*8.3*	7.5
4	3,023	*754*	29.5	*7.1*	15.8

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5 CONCLUSIONS

Three light-duty diesel vehicles of European make, equipped with two different NO_x abatement technologies, namely lean-NO_x trap and urea-based selective catalytic reduction system, and certified to US-EPA Tier2-Bin5 and CARB LEV-II ULEV (CA) emissions standards were operated over a variety of pre-defined test routes exhibiting diverse driving conditions pertinent to major US population centers located in the state of California. Additionally, one vehicle, specifically *Vehicle B*, was driven over an extended distance of nearly 4000km predominantly composed of highway driving conditions between California and Washington State. Gaseous emissions of NO_x, CO, THC and CO_2 were measured using the OBS-2200 PEMS from Horiba Ltd., while particulate number and mass concentrations were inferred from real-time particle charge measurements employing a Pegasor particle sensor.

In summary, real-world NO_x emissions were found to exceed the US-EPA Tier2-Bin5 standard (at full useful life) by a factor of 15 to 35 for the LNT equipped *Vehicle A*, by a factor of 5 to 20 for the urea-SCR fitted *Vehicle B* (same engine as *Vehicle A*) and at or below the standard for *Vehicle C* with exception of rural-up/downhill driving conditions, over five pre-defined test routes. Generally, NO_x emissions were observed to be highest for rural-up/downhill and lowest for high-speed highway driving conditions with relatively flat terrain. Interestingly, NO_x emissions factors for *Vehicles A* and *B* were below the US-EPA Tier2-Bin5 standard for the weighted average over the FTP-75 cycle during chassis dynamometer testing at CARB's El Monte facility, with 0.022g/km ±0.006g/km (±1σ, 2 repeats) and 0.016g/km ±0.002g/km (±1σ, 3 repeats), respectively. Additionally, increased variability between consecutive test runs was observed for *Vehicle A* coinciding with DPF regeneration events, leading to an increase in NO_x emissions by 97% (0.41 g/km to 0.81g/km), 19% (1.38g/km to 1.63g/km), and 38% (1.24g/km to 1.72g/km) for Routes 1, 3, and 4, respectively, between test runs with and without DPF regeneration events. This was speculated to be due to an extended duration of lean exhaust conditions and a lack of frequent enrichment of the exhaust gas ($\lambda < 1$) while DPF regeneration was ongoing, leading to an inhibition of necessary LNT regeneration (D_eNOx), and thus, causing the NO_x storage catalyst to become saturated with NO_x emissions that ultimately started to break through. The probability of this explanation is additionally supported by a detailed description of the after-treatment control strategy for *Vehicle A* presented elsewhere [31].

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NO_x emissions of *Vehicle B* over the cross-multi state driving route, comprising predominantly highway driving, were observed to be on average 0.26g/km ±0.21g/km (±1σ) or approximately 6 times exceeding the US-EPA Tier2-Bin5 standard. However, most interestingly NO_x emissions were found to be below the regulatory standard for portions of the route characterized by low or negligible changes in altitude (i.e. near zero road grade), and with the vehicle operated in cruise-control mode at approximately 120km/h while traveling northbound on Interstate 5 through the San Joaquin Valley (see route portions 3 through 6 in Figure 4.15).

In general, CO and THC emissions were observed to be well below the regulatory level for all three test vehicles and driving conditions, with exception of Routes 1 and 2 for *Vehicle A* where THC emissions were seen to exceed the regulatory level by a small margin (< factor 1.25). Highest THC emissions for *Vehicle A* coincided with lowest NO_x emissions however, no conclusive explanation can be presented herein for why this behavior was observed.

As expected, highway driving showed lowest CO_2, whereas urban/suburban driving conditions lead to highest CO_2 emissions factors for all vehicles. Since both *Vehicles A* and *B* were equipped with the same engine and similar test weights (i.e. 1855kg vs. 1884kg), comparable CO_2 consumption patterns were observed in agreement with results obtained during chassis dynamometer testing over the NEDC for urban/suburban and highway driving portions. It has to be noted that the equivalent vehicle test weight during chassis dynamometer testing was 1701kg for both *Vehicles A* and *B*, or ~8% lower compared to vehicle weights during on-road PEMS testing. Finally, CO_2 emissions factors for *Vehicle C* were observed to exceed the EPA/NHTSA CO_2/CAFE standard for the applicable LDT4 vehicle category with an actual vehicle test weight of 2903kg. The equivalent test weight for CO_2 emissions evaluation as per EPA procedure is 2495kg, or ~14% lower compared to the actual vehicle weight during on-road PEMS testing. Average fuel economy for highway driving with *Vehicles A* and *B* was 45.3 mpg ±8.6mpg (±σ1) and 43.7mpg ±5.7mpg (±σ1), respectively, and 27.3 mpg (no repetition) for *Vehicle C* which is ~39% lower compared to *Vehicles A* and *B*. On the other hand, urban/suburban driving results in average fuel economies of 30.0mpg ±2.9mpg (±σ1) and 26.6 mpg ±1.4mpg (±σ1) for *Vehicles A* and *B*, respectively, and 18.5mpg ±4.0mpg (±σ1) for *Vehicle C* which is 35% lower compared to *Vehicles A* and *B*. Overall, urban/suburban driving leads to a 32-39% reduction in fuel economy over highway driving.

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Particulate matter mass emissions, inferred from PPS measurements, were observed below the US-EPA Tier2-Bin5 standard for *Vehicles A* and *B*. On the other hand, particulate number emissions were found to exceed the Euro 5b/b+ PN standard during DPF regeneration events increasing by 2 to 3 orders of magnitude over emissions levels measured during none-regeneration events. It is noted that PN is not regulated in the United States. During the multi-state driving route, DPF regeneration frequency for *Vehicle B* was established to be predominantly based on distance traveled, occurring after every 756km ±29km (±1σ), corresponding to ~7.07hours ±0.06hours for highway driving conditions.

It is noted that only three vehicles were tested as part of this measurement campaign with each vehicle being a different after-treatment technology or vehicle manufacturer; conclusions drawn from the data presented herein are confined to these three vehicles. The limited data set does not necessarily permit drawing more generalized conclusions for a specific vehicle category or after-treatment technology.

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7 APPENDIX

7.1 Exhaust Emissions Calculations with Horiba OBS-2200

7.1.1 Time alignment of real-time emissions concentrations

The individual emissions concentrations are shifted to account for transport delays from the sampling plane (reference point) to the analyzer cells through the heated transfer line, heated filter and internal plumbing of the OBS. This is done in order to time-align the concentration values with the respective exhaust flow rates for calculation of time-specific mass emissions rates. Exhaust concentration alignment is automatically performed by the OBS software, hence; the emissions concentrations reported in the data sets (csv-files) are already time-aligned. Transport delay times (T_{50}) are calculated from spike-recovery tests during the calibration and initial setup of the OBS instrument. The csv-files report the delay times in column '*E*' in the file header.

7.1.2 Drift correction of real-time emissions concentrations

Drift corrections of the emissions concentrations are performed in order to account for possible analyzer drift over the measurement period. Prior to data collection over a test route, '*pre-zero*' and '*pre-span*' adjustments are performed for each analyzer. Upon completion of a test route, '*post-zero*' and '*post-span*' values are automatically collected by the OBS software for each analyzer. If the duration of a test route exceeds one hour (i.e. 3600 seconds), the OBS will automatically interrupt data collection for a period of 30 seconds to perform a '*post-zero*' and '*post-span*' check as well as make zero/span adjustments for each analyzer before continuing with data collection. Zero-drift and span-drift values are reported in columns '*I*' and '*J*', respectively of the csv-file. Using these values, the OBS software automatically performs a drift correction of the real-time emissions concentration values upon completion of data collection (e.g. end of test route) using Equation (1).

7.1.3 Averaging Window Method (AWM)

In this method emission rates are integrated along with one of the listed criteria from time $t = 0.0\ sec$ until the chosen criteria has reached a target value. The target values are normally derived from standardized test cycles used in certifying engine families in test cell. The time

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interval between $t_{start} = 0.0\ sec$ to $t_{end} = x.x\ sec$ where the integrated value of the chosen criteria is equal to its target is called a window, and for a moving window method the process is repeated with a new starting time being $t_{start} = 0.0 + 1.0\ sec$ until a new window is achieved. Emissions rates of regulated pollutants are integrated for the above criteria windows, and have to meet the set in-use emissions standards. The criteria windows are valid only if the average engine power for each window is greater than or equal to 20% of maximum engine power. Similarly for an in-use test to be valid there should be at least 50% of criteria windows should be valid. If there are no 50% valid criteria windows in an in-use test then the window validity condition is reduced as low as 15% of maximum engine power in increments of 1% of average power.

7.2 Particle Number Measurement with European PMP Method

Streamlined with the introduction of PN limits (i.e. Euro 5b/b+ [4]), the European Union adopted a new methodology aimed at standardizing the measurement of total particle number concentrations by only counting solid particles having a diameter between 23nm and 2.5µm and that are thermally treated in order to reduce the volatile fraction, thus reducing measurement artifacts and variability [27]. This method has been previously developed under the Particle Measurement Program (PMP) of the United Nation's Economic Commissions for Europe - Group of Experts on Pollution and Energy (UN-ECE-GRPE) [34, 35, and 36] leading to the following operational definition of particle numbers: '*measurement of solid particles having a diameter between 23nm and 2.5µm and are of sufficiently low volatility to survive a residence time of 0.2sec at 300°C*' [37].

The sampling system comprises a volatile particle remover (VPR) and an ultrafine particle counter optimized for a 50% counting efficiency for 23nm size particles. The VPR is designed to remove the volatile and semi-volatile fractions in the exhaust sample, thereby aiming at suppressing particle nucleation and the formation of artifacts in the sample stream. A first stage hot dilution (at 150 to 400°C and dilution ratio of 10) is used to reduce particle concentration in the sample before being directed into the evaporation tube (operated at 300 to 400°C) where the volatile and semi-volatile components are being transferred to a gaseous state. It follows a second cold dilution stage (dilution ratio between 10 to 15) to i) rapidly lowering the partial pressures of the gaseous components aimed at preventing their re-condensation, and ii) lowering

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the sample temperature to below 35°C prior to entering the particle counting device. The Pegasor particle sensor for example has the advantage of not having a very limited range requirement for sample inlet temperatures (up to ~800°C), thus allowing for direct measurement of raw exhaust gases and thereby ultimately reducing the magnitude of size dependent particle losses as occurring in the VPR.

However, the PMP approach for particle number measurements has come under scrutiny as recent studies have on one hand observed significant semi-volatile particles downstream the VPR [38, 39], and on the other hand measured increased concentrations of particles below the size of 23nm being emitted from DPF equipped vehicles. These ultrafine particles are believed to comprise sulfuric acid and assumed to be emitted from catalytic oxidation of sulfur from lubrication oil [40, 41, and 42]. Johnson et al. [37] evaluated the European PMP methodology during on-road vehicle testing and observed a significant portion of particles in the size range below 20nm even though the sample stream was thermally treated according to PMP requirements, thus questioning the applicability of the 23nm lower cut-point for particle measurements, as mandated by the European PMP regulation.

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7.3 ULSD Fuel Analysis for Vehicles A and B

SGS HERGUTH LABORATORIES

Certificate of Analysis
Lab Number V7012631A

Francisco Posada Sanchez
The International Council
on Clean Transportation
1225 "I" Street NW, Suite 900
Arlington VA 20005

03/12/13

Page 1

Client Code : THEICF Sample Date : 02/25/13 P.O. Number : POSTED CASH
Herguth ID : LABV7012631
Description : Commercial Grade Diesel Fuel
Oil Type : Diesel Fuel (GN_130)
Unit Type : Diesel Fuel (GN_DF001)

Test Performed	Proc-Rev	Result	
Sulfur by Microcoulometry ASTM D3120	3120-3.1	5	mg/kg
Density @ 15C ASTM D4052	4052-1.7	0.8355	g/mL
Biodiesel Blend as FAME by FTIR HL-1141A	1141A-1.1	0.32	vol. %
Aromatic Content & PAH by SFC ASTM D5186	5186-1.0		
Mono-Aromatics ASTM D5186		13.9	% wt
Polynuclear Aromatic Hydrocarbons, PAH ASTM D5186		1.7	% wt
Total Aromatics ASTM D5186		15.6	% wt
Ultimate Analysis	5291-1.0		
Carbon ASTM D5291		86.16	mass %
Hydrogen ASTM D5291		13.67	mass %

REVISED REPORT supersedes lab # V7012631 and includes additional test results.
Data is reported per client specified testing request.
Fourier Transform Infrared Analysis (FTIR) of the fuel sample submitted shows the percent of Fatty Acid Methyl Ester (FAME) component in the ~1750 cm-1 wavenumber region. FAME is the major indicator for Biodiesel. The FTIR was calibrated based on standards prepared by blending Diesel with B100 Soy Biodiesel.
Aromatic Content & PAH by SFC and Ultimate Analysis was subbed out.

Respectfully Submitted,
SGS Herguth Laboratories, Inc.

cc: Francisco Posada Sanchez

Bobby R Licu, Evaluations Manager

These results are submitted pursuant to our current Terms, Conditions and Limitations and Laboratory Pricing Policy.
No responsibility or liability is assumed for the manner in which these results are used or interpreted.
*101 Corporate Place, Vallejo, CA 94590-6968 * Toll-Free Phone 1-800-645-5227 * Fax 1-707-554-0109 * www.herguth.com*
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OFF-CYCLE LIGHT-DUTY DIESEL VEHICLE EMISSIONS UNDER REAL-WORLD DRIVING CONDITIONS

Marc C. Besch, Arvind Thiruvengadam, Hemanth Kappanna, Pragalath Thiruvengadam, Gregory Thompson, Daniel K. Carder (*WVU*)

Francisco Posada, Vicente Franco, John German, Anup Bandivadekar (*ICCT*)

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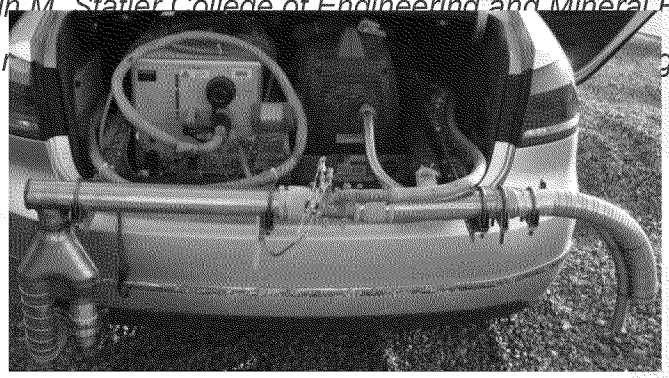
CAFEE

Center for Alternative Fuels, Engines, and Emissions

West Virginia University

Benjamin M. Statler College of Engineering and Mineral Resources

Depar[illegible]g (MAE)



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THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

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CONTENT

- Motivation and Background
- Experimental Methodology
  - Test Vehicles
  - Real-World Driving Routes
  - Instrumentation and Test Equipment
- Results and Discussion
  - On-road NO_x, CO, and THC emissions
  - CO_2 emissions and fuel economy
  - Particle number emissions with and without DPF regeneration
- Conclusion
- Recommendations/Outlook

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BACKGROUND AND MOTIVATION

- Increased ***off-cycle NO_x emissions*** identified from light-duty diesel vehicles in Europe
  - exceed the Euro 3-5 emissions standards on average by a factor of 4 to 7 over specific test routes
- Vehicles meet certification levels for emissions while operated over standard chassis dynamometer cycles (e.g. FTP-75, NEDC)
  - introduction of tighter emissions limits for the purpose of vehicle certification has not necessarily translated into effective on-road NO_x reductions of the same magnitude
  - NO_2 levels in European member states exceeding ambient air quality standards
  - Exhaust temperature dependency of SCR activity (low load operation, stop/go traffic)
- European Commission established working group to propose modifications to current vehicle certification procedure
  - emissions testing with random driving cycle generation in the laboratory
  - on-road emissions testing with PEMS equipment

=> ~~Need to characterize off-cycle NO_x emissions from Tier2-Bin5 / LEV-II ULEV light-~~ duty diesel vehicles operating in US

Weiss, M., Bonnel, P., Hummel, R., Manfredi, U., Colombo, R., Lanappe, G., Le Lijour, P., and Sculati, M., "Analyzing on-road emissions of light-duty vehicles with Portable Emission Measurement Systems (PEMS)," JRC Scientific and Technical Reports, EUR 24697 EN, (2011).

METHODOLOGY - Test Vehicles

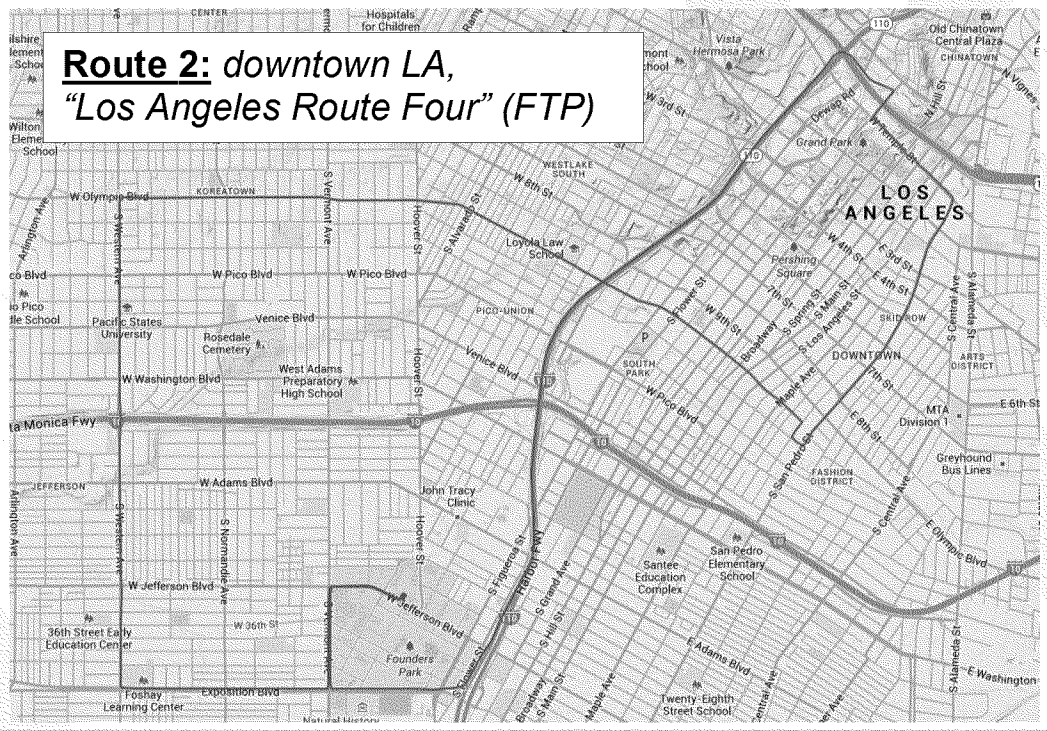
Vehicle		A	B	C
Mileage at test start [miles]		4,710	15,226	15,031
Fuel		ULSD	ULSD	ULSD
Engine displacement [L]		2.0	2.0	3.0
Emission after-treatment technology		**OC, DPF, LNT**	**OC, DPF, urea-SCR**	**OC, DPF, urea-SCR**
Drive train		2-wheel drive, front	2-wheel drive, front	4-wheel drive
Applicable emissions limit	*U.S. EPA*	**Tier2 - Bin5 (LDV)**	**Tier2 - Bin5 (LDV)**	**Tier2 - Bin5 (LDV)**
	CARB	**LEV-II, ULEV**	**LEV-II, ULEV**	**LEV-II, LEV**
EPA Fuel Economy Values [mpg] [1)]	*City*	29	30	19
	Highway	39	40	26
	Combined	33	34	22
EPA CO_2 Values [g/km] [1)]		193	186	288
Actual Test Weight [kg]		1855	1884	2903
Payload [kg]		305	314	533

1) *EPA advertised fuel economy and CO_2 emissions values for new vehicles in the US (www.fueleconomy.gov)*

- Vehicles did not indicate any after-treatment or engine malfunction (ECU scan)
- *Vehicles A* and *B* were tested on chassis dynamometer and complied with certification standards for all regulated emissions

METHODOLOGY - Test Routes

- Route 1: *highway driving in Los Angeles*
- Route 2: *urban driving in downtown Los Angeles*
- Route 3: *rural and uphill/downhill driving in LA's foothills*
- Route 4: *urban driving in downtown San Diego*
- Route 5: *urban driving in downtown San Francisco*

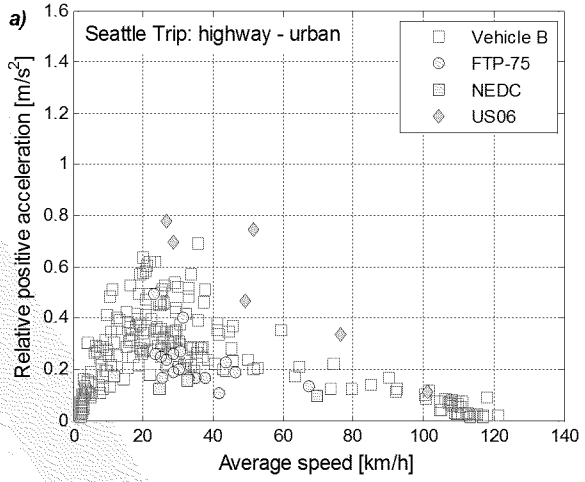


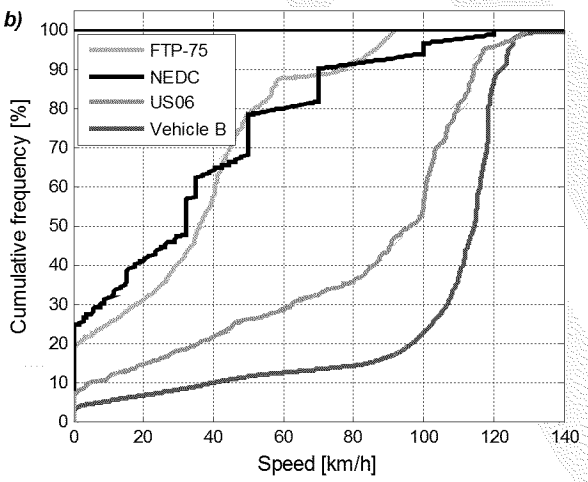
METHODOLOGY - 'Multi-State' Route

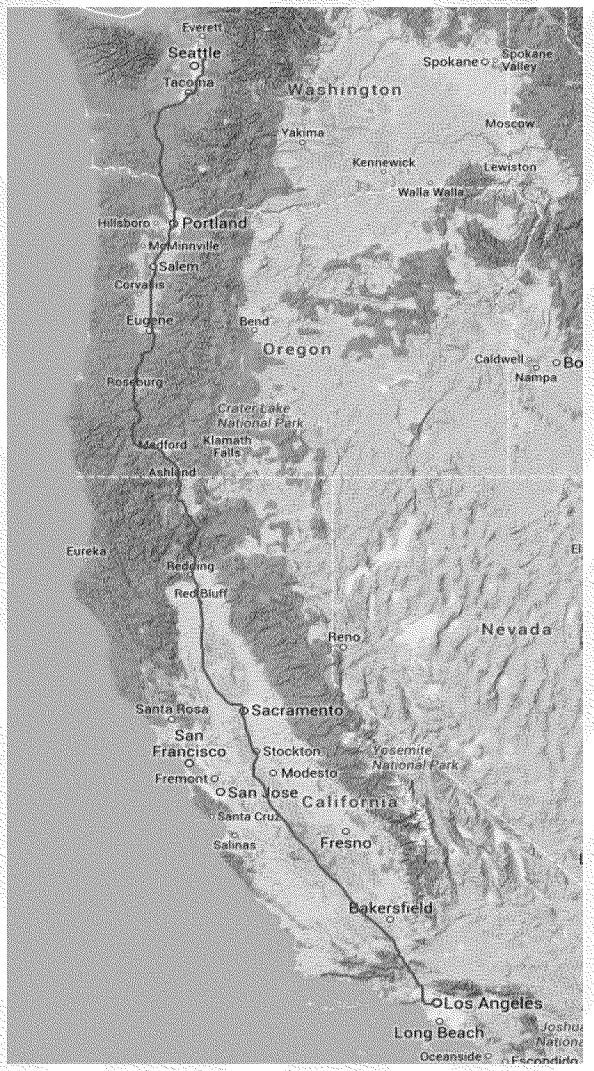
- Los Angeles to Seattle via Interstate I-5N and I-5S

Parameters	Value
Route duration [hr]	39.31
Route distance [km]	3968.10
Avg. vehicle speed [km/h]	100.95
Max. vehicle speed [km/h]	120.00
Avg. RPA [1] [m/s^2]	0.23
Characteristic Power [m^2/s^3]	2.63
Min. elevation [m a.s.l. [2]]	1.0
Max. elevation [m a.s.l.]	1320.1

Parameters	Value
Share [%] (*time based*)	
- idling (≤2 km/h)	3.4
- low speed (>2≤50 km/h)	8.1
- medium speed (>50≤90 km/h)	5.0
- high speed (>90 km/h)	83.5

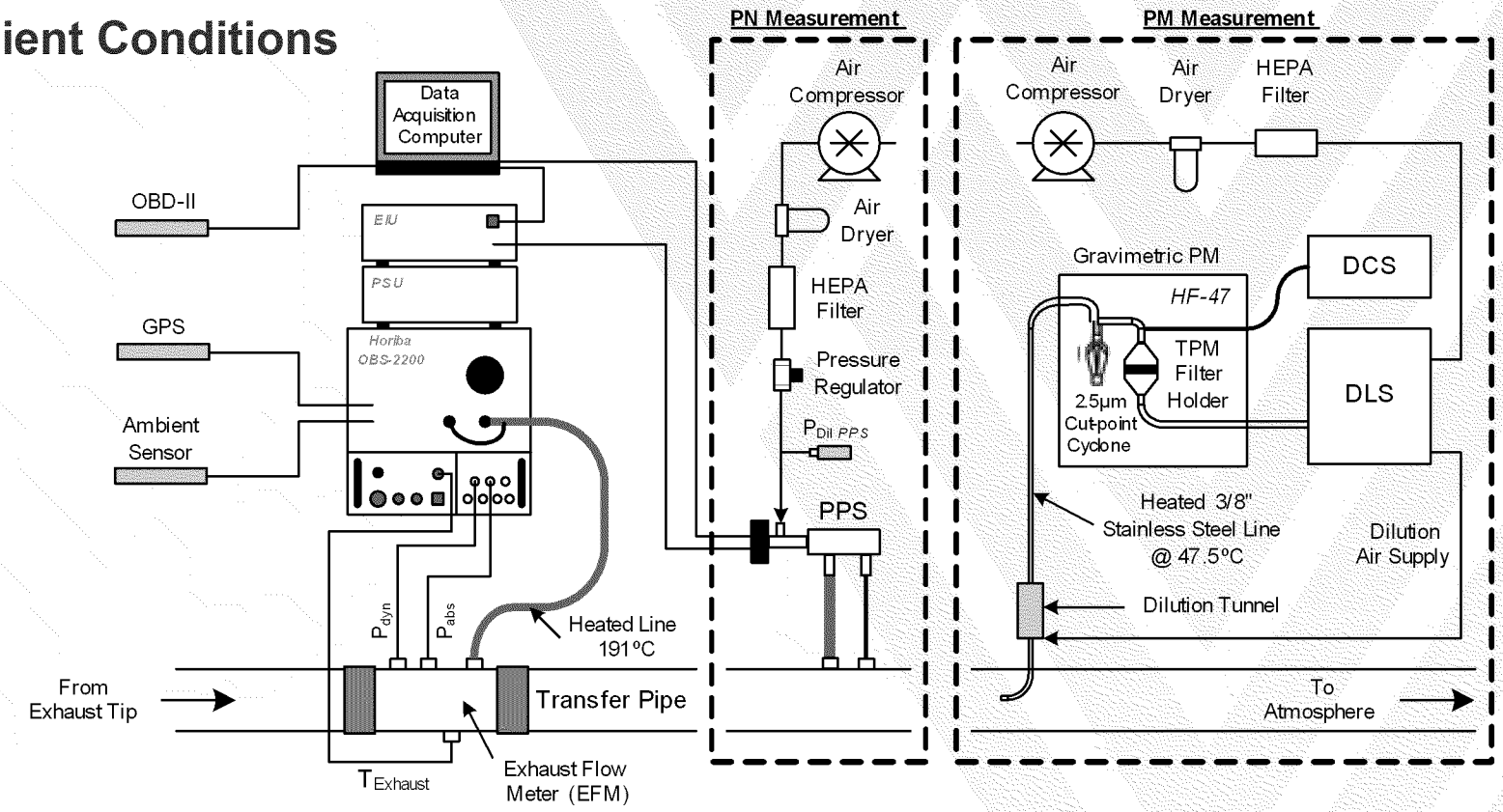






METHODOLOGY - Instrumentation

- **Gaseous Emissions:** Horiba OBS-2200 PEMS
- **PM Emissions:** Pegasor Particle Sensor (PPS-M) and Horiba OBS-TRPM
- **ECU OBD-II Data**
- **Ambient Conditions**
- **GPS**



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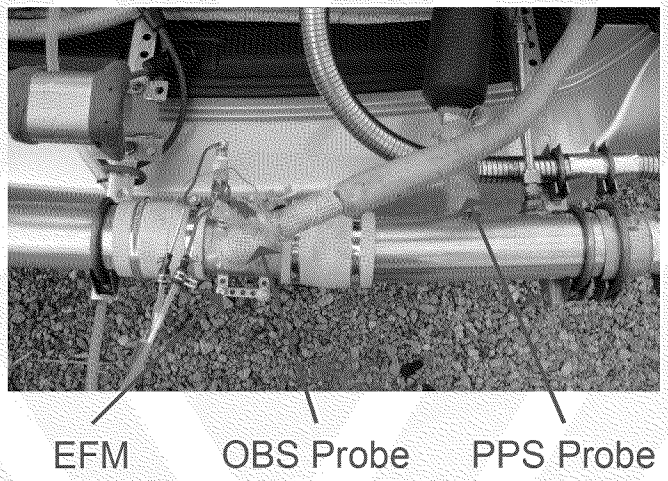
METHODOLOGY - Test Matrix

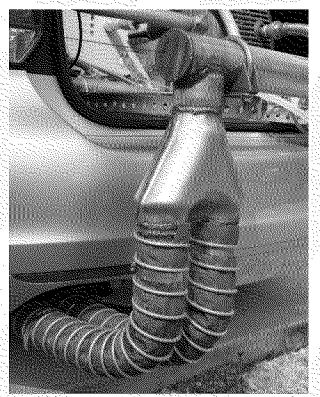
- On-road vehicle test matrix

Route	Vehicle A	Vehicle B	Vehicle C
Route 1: highway	2	2	1
Route 2: urban (Los Angeles)	2	2	2
Route 3: rural - uphill/downhill	2	2	3
Route 4: urban (San Diego)	2	2	
Route 5: urban (San Francisco)		1	2
Cross-State Trip CA to WA		X	



- Emissions measurement matrix

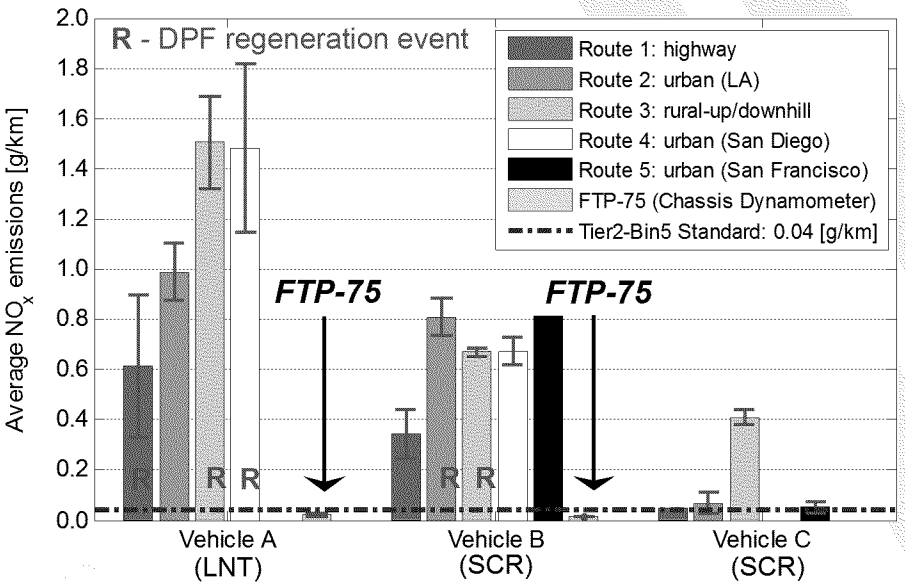
Component	Vehicle A	Vehicle B	Vehicle C
Gaseous emissions	X	X	X
Particle number (*PPS*)	X	X	
Particle mass (*OBS-TRPM*)			X



- Instrumentation readiness during 'multi-state' route

Instrument	Total time of operation [hr]	Fraction of total trip duration [%]	Total distance of operation [km]	Fraction of total trip distance [%]
OBS (gaseous emissions)	23.6	60.1	2352.0	59.3
ECU (engine parameter)	31.2	79.4	3143.3	79.2
PPS (particle emissions)	22.7	57.8	2304.6	58.1

RESULTS - Routes NO_x Emissions

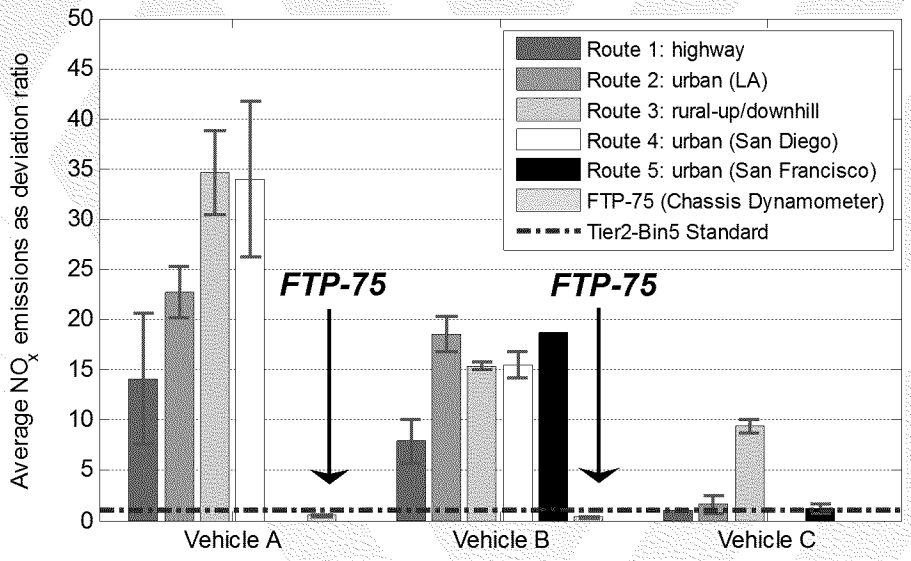


- Highest NO_x emissions during rural/up-downhill and lowest NO_x during highway driving
- LNT shows deficiencies in NO_x reduction over urea-SCR system
- Increase in NO_x emissions during tests with DPF regeneration event => especially pronounced for *Vehicle A* (LNT)
- Route 1, Vehicle A contains rush-hour and non-rush-hour traffic conditions

Chassis dynamometer test results for NO_x

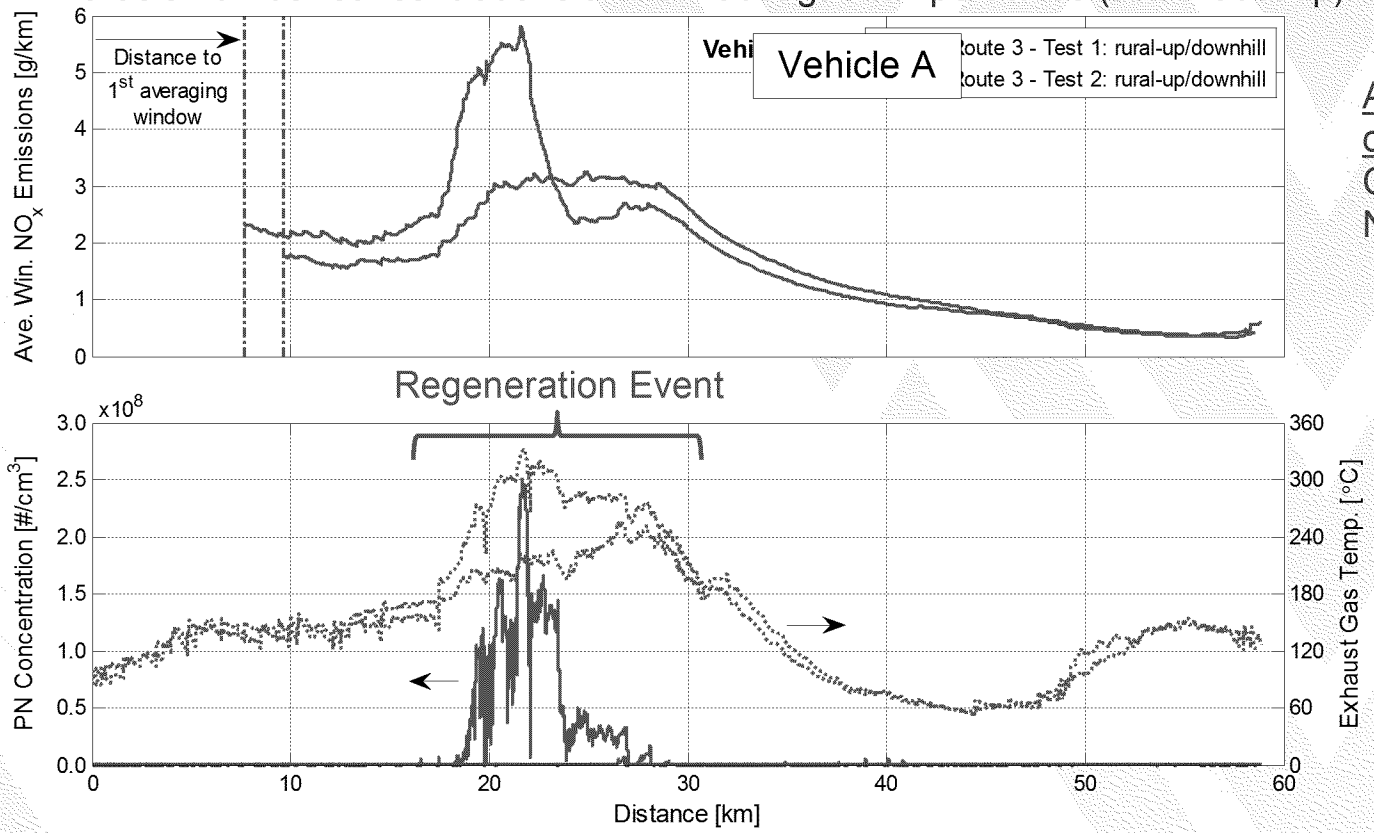
Vehicle	NO_x over FTP-75 [g/km]	Rel. to Tier2-Bin5 [%]
Vehicle A	0.022 ±0.006	50.4
Vehicle B	0.016 ±0.002	64.1
Vehicle C	(no data)	(no data)

NO_x standard EPA Tier2-Bin5, CARB LEV-II ULEV over FTP-75: ***0.044 g/km***



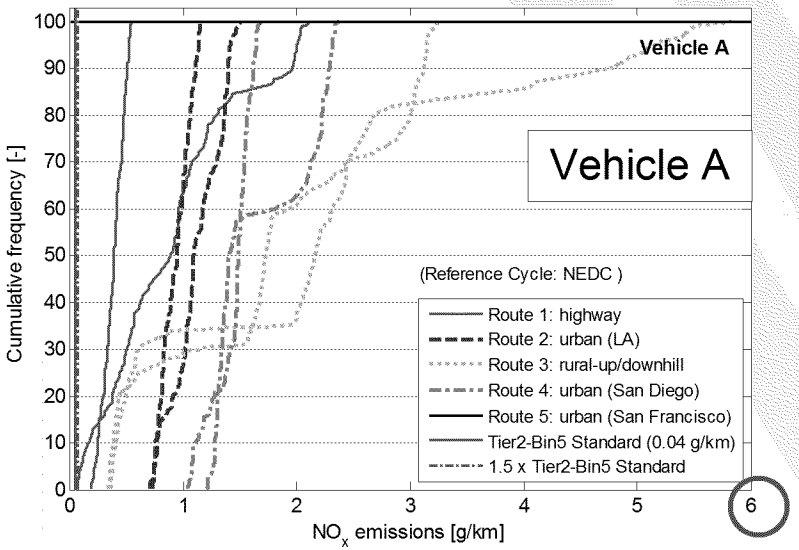
RESULTS - Routes NO_x Emissions

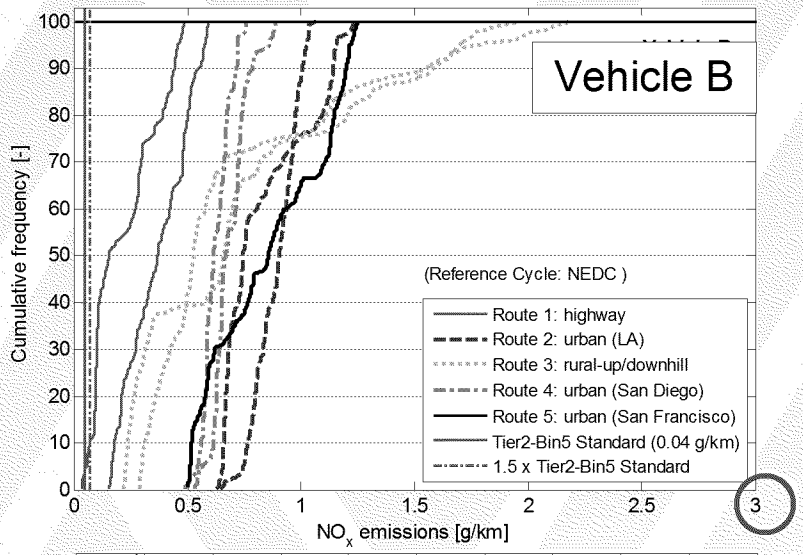
- Comparison of tests with and without DPF regeneration for Vehicle A, Route 3 (up/downhill)
  - Continuous averaging window NO_x emissions vs. distance
  - Particle number concentrations and exhaust gas temperatures (at exhaust tip) vs. distance

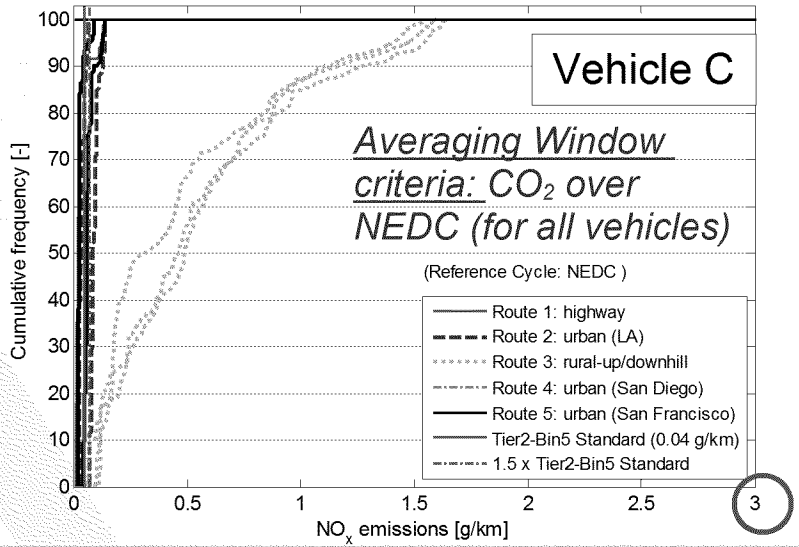


Averaging Window criteria:
CO_2 emissions over NEDC (1938.6g)

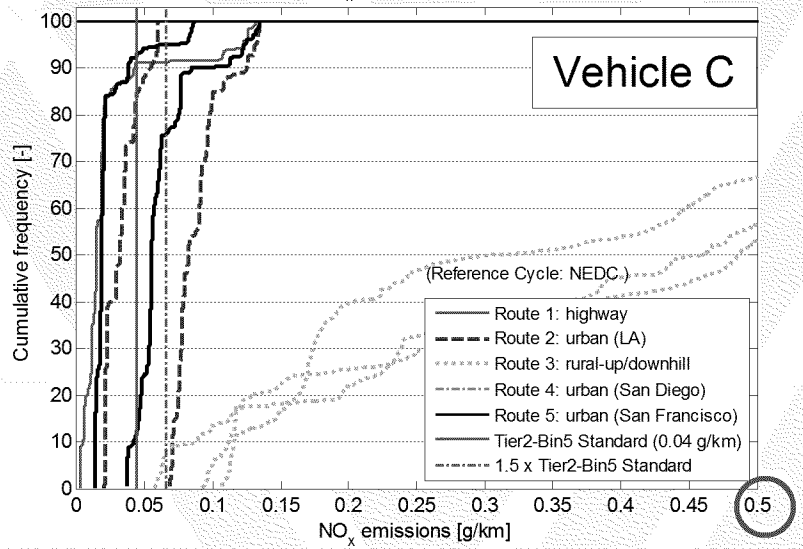
RESULTS - Averaging Window NO_x Emissions



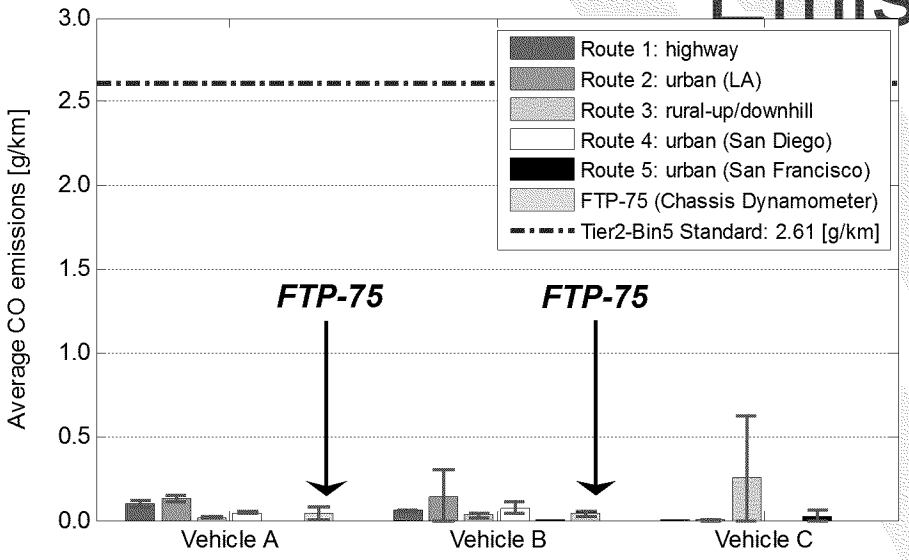




Zoom x-axis



RESULTS - Routes CO/THC Emissions

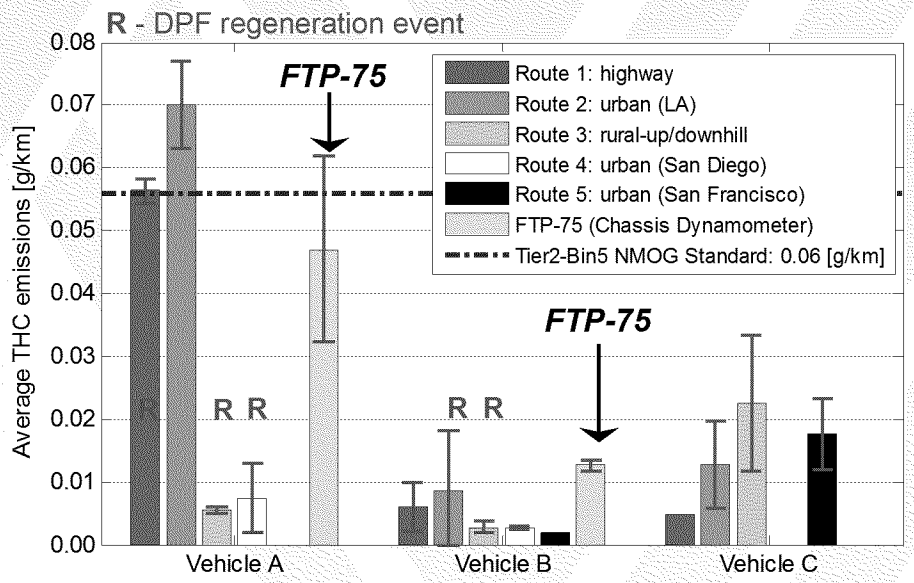


- CO emissions close to two orders of magnitude below Us-EPA Tier2-Bin5 standard
- No particular pattern found for CO as function of driving or route conditions
- *Vehicles A* and *C* show highest CO during urban and highway driving

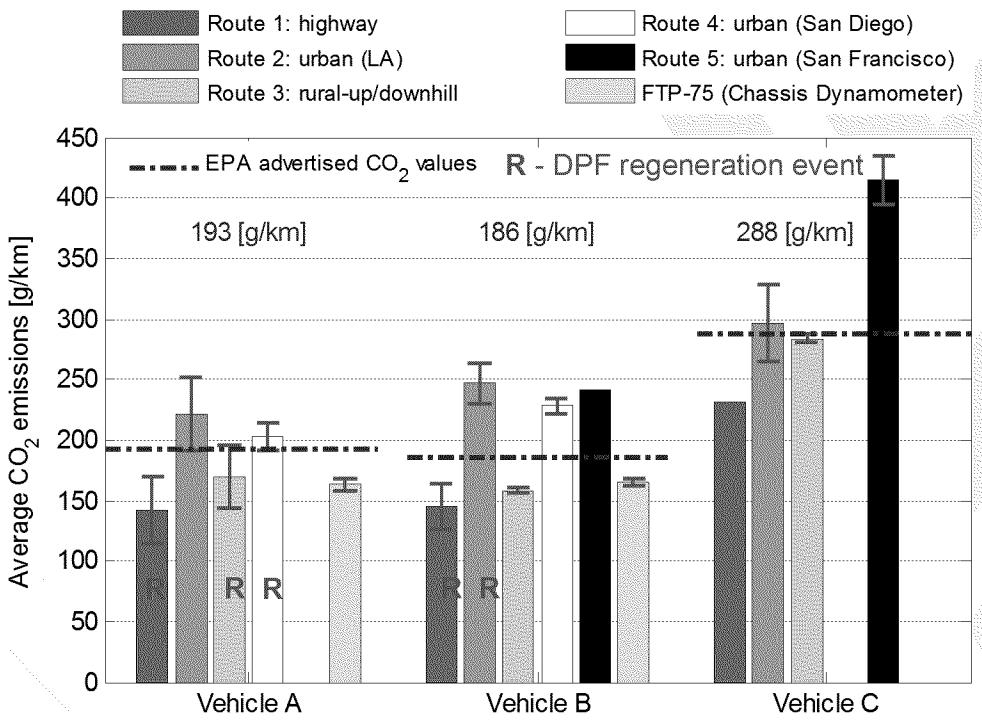
- THC emissions in general below NMOG (NMHC) Tier2-Bin5 standard
- **Caution:** Chassis dynamometer testing showed >80% CH_4/THC ratio
  - Only THC measured during on-road testing

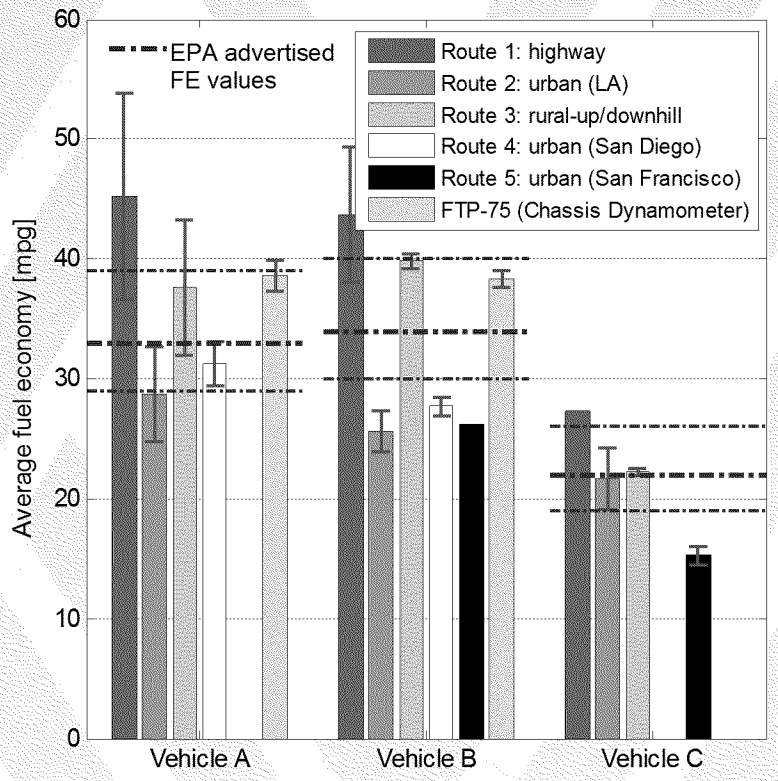
Chassis dynamometer testing over FTP-75

	Vehicle A	Vehicle B
CH4/THC Ratio [%]	99.87	87.23



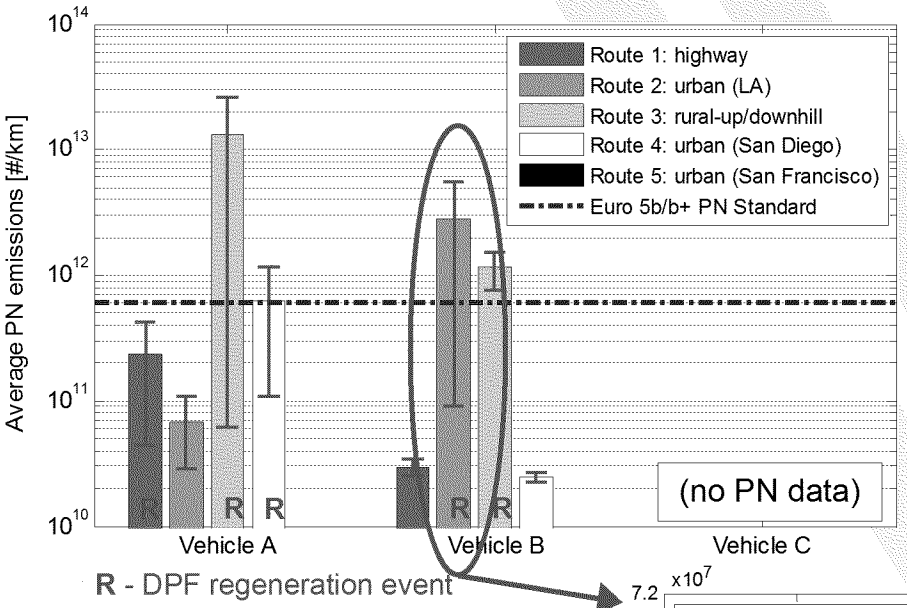
RESULTS - Routes CO_2 Emissions





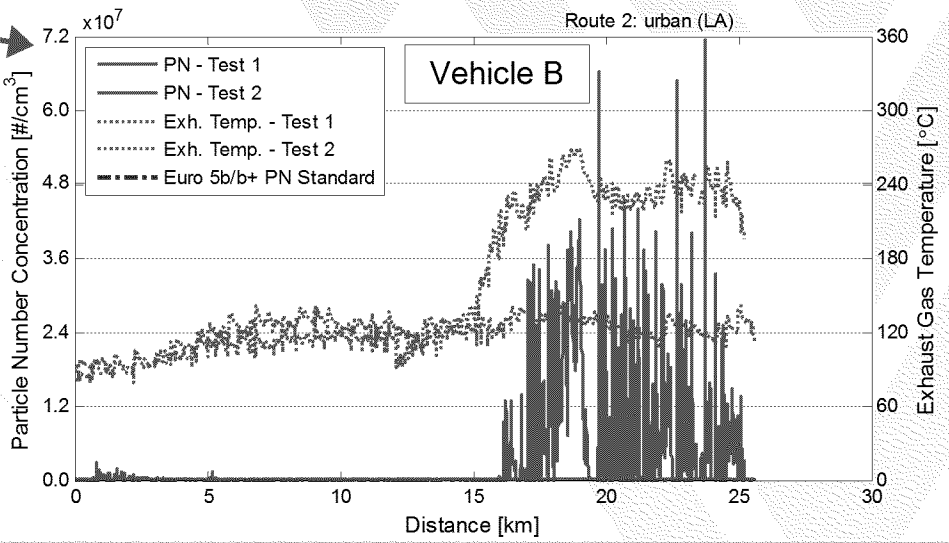
- Highway driving (i.e. Route 1) showed lowest CO_2 emissions / best fuel economy
- Urban/suburban driving showed highest CO_2 emissions / lowest fuel economy
- A 31% increase in CO_2 observed between non-rush-hour and rush-hour highway driving for *Vehicle A*
- Increased CO_2 emissions observed during DPF regeneration events for *Vehicles A* and *B*

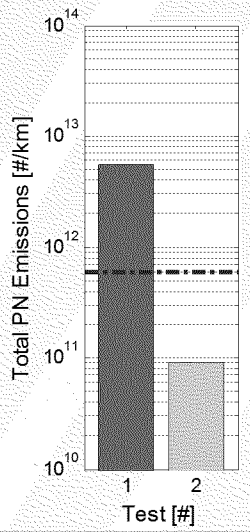
RESULTS - Routes PN Emissions



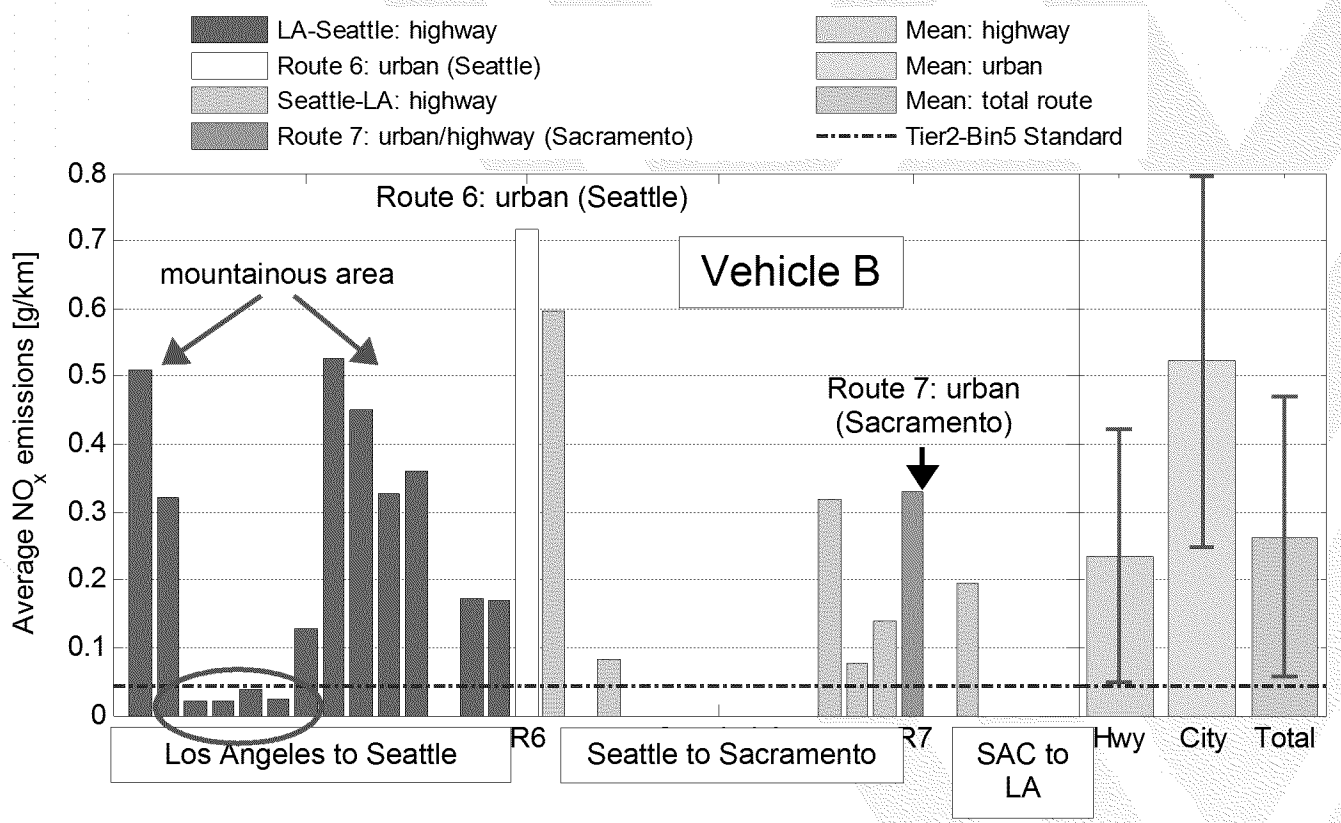
- Euro 5b/b+ standard: 6×10^{11} [#/km]
- **Caution:** PN inferred from PPS measurements => sampling conditioning and particle counting not strictly according to PMP method
- PN increased by up to two orders of magnitude during DPF regeneration events

- In general PN remain one order of magnitude below Euro 5b/b+ standard for tests without DPF regeneration events



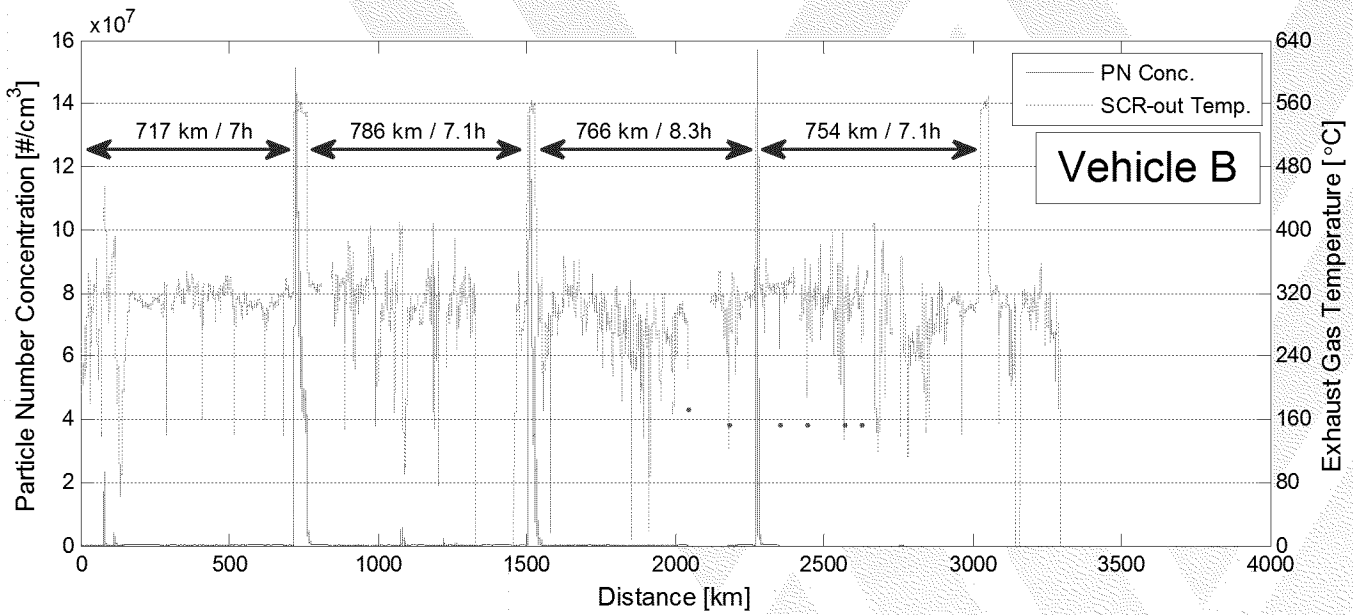


RESULTS - 'Multi-State' Route NO_x



- Exceeding NO_x Tier2-Bin5 standard on average by a factor of 6 over entire route
- NO_x emissions below Tier2-Bin5 level observed during traveling northbound on I-5 through San Joaquin Valley
  - low or negligible changes in altitude (i.e. near zero road grade)
  - Vehicle operated at constant speed conditions of 120km/h (cruise-control mode)

RESULTS - 'Multi-State' Route PN



- Distance and time based DPF regeneration intervals for Vehicle B (*primarily highway*)
  - Avg. distance: 756km ±29km (±1σ)
  - Avg. time: ~7.07hours ±0.06hours (±1σ, not including third event)

Event [#]	Distance to event [km]	Distance based f_{regen} [km]	Time to event [hr]	Time based f_{regen} [hr]	Duration [min]
1	717	*717*	7.0	*7.0*	22.4
2	1,503	*786*	14.1	*7.1*	15.2
3	2,269	*766*	22.3	*8.3*	7.5
4	3,023	*754*	29.5	*7.1*	15.8

CONCLUSIONS

- *Vehicles A* and *B* complied with regulatory standards for all pollutants during chassis dynamometer testing over certification cycles (*Vehicle C* was not tested).
- In-use NO_x emissions
  - *Vehicle A*: 15-35 times higher than the FTP standard,
  - *Vehicle B*: 5-18 times higher than FTP standards,
  - *Vehicle C*: generally below the FTP standard.
- DPF regeneration events were observed to increase NO_x emissions by up to 50% for the LNT equipped vehicle (only small effect on SCR vehicles observed)
- In-use HC emissions were far below the standard for *Vehicles B* and *C* and slightly higher but remaining below the standard for *Vehicle A*.
- In-use CO emissions were far below the standard for all three vehicles.
- In-use PN emissions were generally one order of magnitude below $6x10^{11}$ [#/km] during routes that did not experience DPF regeneration events.
- PN emissions increased by up to two orders of magnitude during DPF regeneration events

RECOMMENDATIONS / OUTLOOK

- Limited sample space (three vehicles, two technologies, only one sample per vehicle) does not allow to draw definitive implications/conclusions.
  - Increased sample numbers required => additional testing of more vehicles needed
- Large discrepancy observed between NO_x emissions from certification testing on chassis dynamometer an on-road testing needs further investigation.
  - Might SFTP (incl. US06 cycle) NO_x standards be too lenient, allowing for increased NO_x emissions under higher load conditions?
- *Vehicle C* has shown that NO_x emissions at the Tier2-Bin5 standard during diverse on-road operation is possible.
- More study needed for very high NO_x emissions observed during particulate filter regeneration events, especially for LNT system
- More work needed to understand PN emissions => PMP method versus capturing below 23nm partilces

THANK YOU FOR YOUR ATTENTION

Marc C. Besch - Marc.Besch@mail.wvu.edu

Daniel K. Carder - Daniel.Carder@mail.wvu.edu

Arvind Thiruvengadam - Arvind.Thiruvengadam@mail.wvu.edu

CAFEE Center for Alternative Fuels, Engines and Emissions

ACKNOWLEDGEMENT

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THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

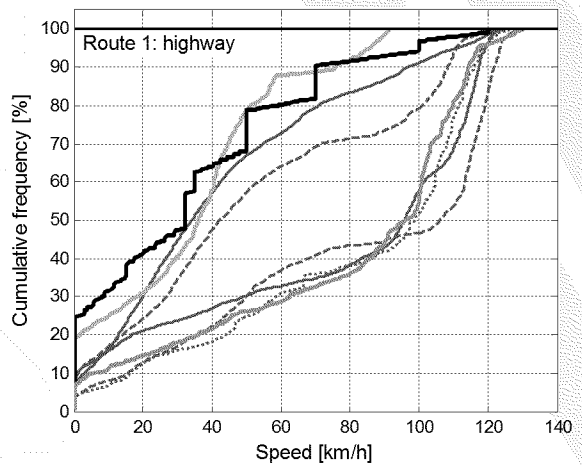
California Environmental Protection Agency
AIR RESOURCES BOARD

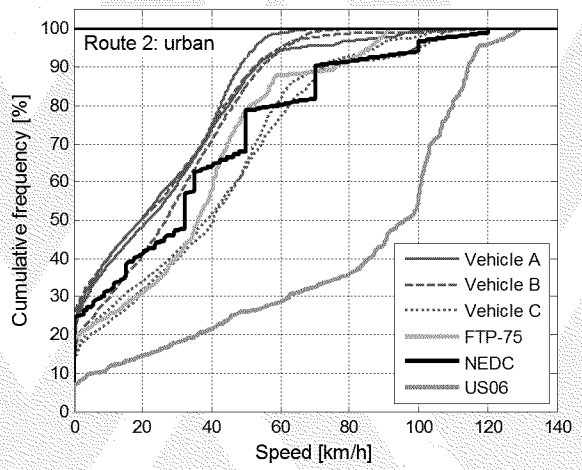
METHODOLOGY - Test Routes

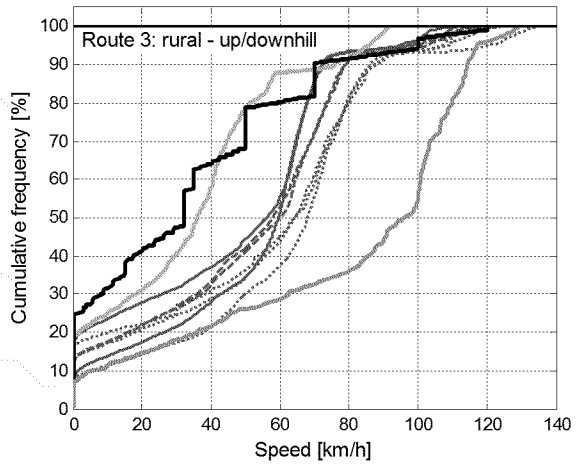
- Route 1: *highway driving in Los Angeles*
- Route 2: *urban driving in downtown Los Angeles*
- Route 3: *rural and uphill/downhill driving in Los Angeles's foothills*
- Route 4: *urban driving in downtown San Diego*
- Route 5: *urban driving in downtown San Francisco*

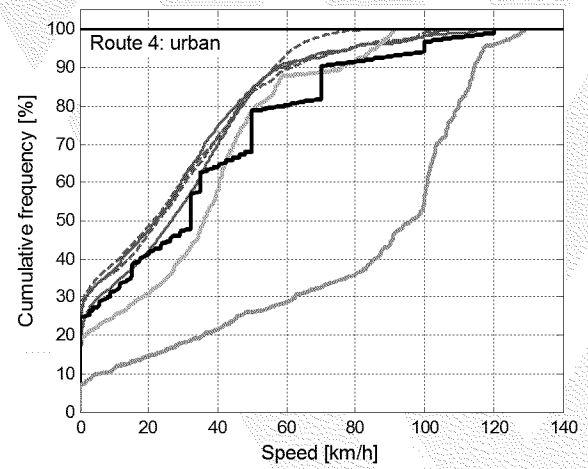
Route	**Route 1**	**Route 2**	**Route 3**	**Route 4**	**Route 5**
Route distance [km]	70.18	25.67	59.09	21.22	26.72
Avg. vehicle speed [km/h]	77.85	24.09	52.27	26.54	24.69
Max. vehicle speed [km/h]	112.65	92.57	112.65	109.87	112.65
Avg. RPA [3] [m/s^2]	0.24	0.27	0.26	0.30	0.33
Characteristic Power [m^2/s^3]	2.57	2.24	3.93	2.60	2.97
Min. elevation [m a.s.l. [4]]	46.0	42.1	300.1	1.1	1.0
Max. elevation [m a.s.l]	360.1	123.5	1319.7	101.4	190.9
Share [%] (*time based*)					
- idling (≤2 km/h)	7.0	23.8	13.5	26.8	27.9
- low speed (>2≤50 km/h)	20.5	64.2	23.9	57.0	58.9
- medium speed (>50≤90 km/h)	14.9	11.2	55.6	12.9	7.5
- high speed (>90 km/h)	57.7	0.8	7.0	3.3	5.6

METHODOLOGY - Test Routes

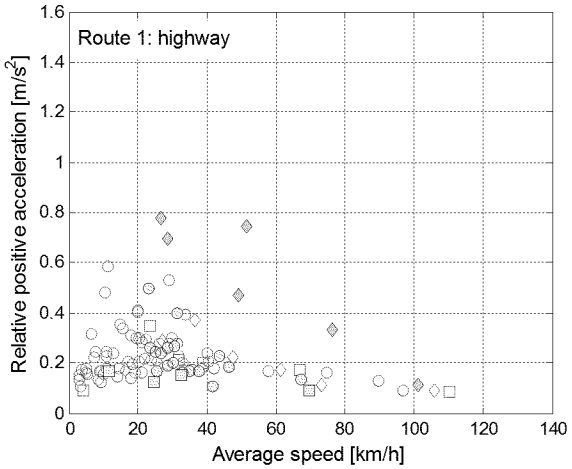


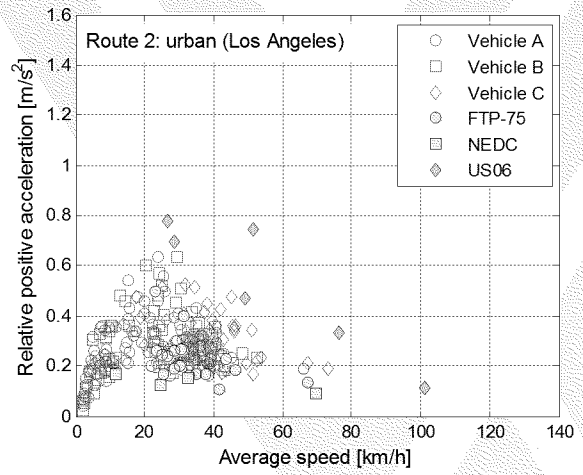


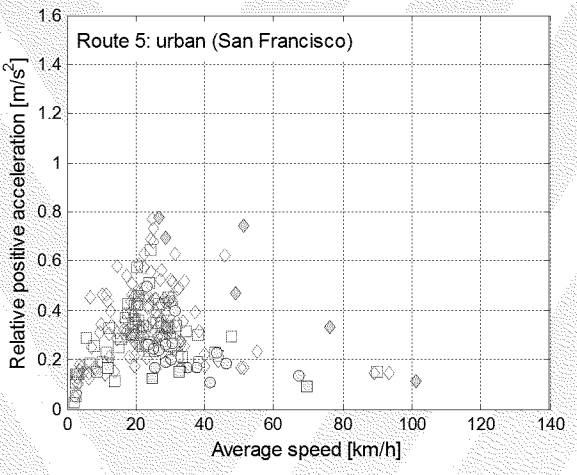


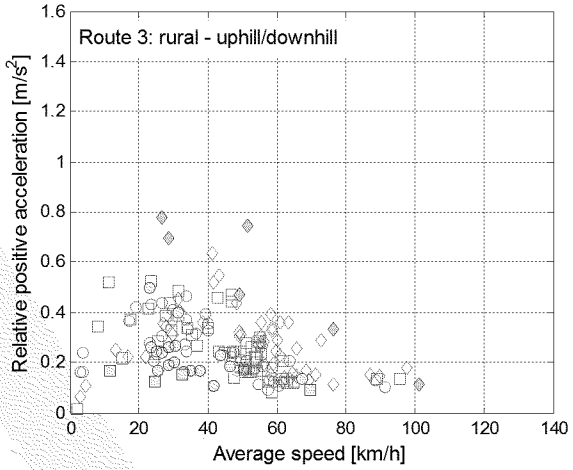


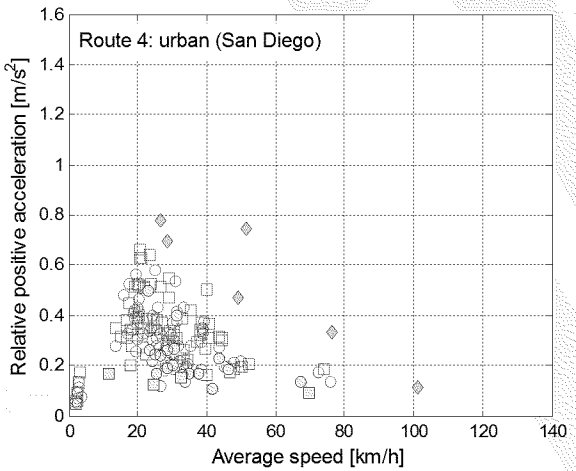
METHODOLOGY - Test Routes











Relative Positive Acceleration

- RPA over given "*micro-trip*"
- *"Micro-trip"*
  - Speed > 2km/h for t ≥ 5sec

$$\mathrm{RPA} = \frac{\int_0^{t_j} \left(v_i \cdot a_i\right) dt}{x_j}$$

RESULTS - Data Analysis

- Applicable regulatory emissions limits; US-EPA Tier2-Bin5 at intermediate useful life (5years/ 50,000 mi) for NO_x, CO, THC (eq. to NMOG), and PM; EPA advertised CO_2 values for each vehicle; Euro 5b/b+ for PN

NO_x [g/km]	CO [g/km]	THC [g/km]	CO_2 [g/km]	PM [g/km]	PN [#/km]
0.043	2.610	0.056	193 (*Vehicle A*) 186 (*Vehicle B*) 288 (*Vehicle C*)	0.006	$6.0x10^{11}$

- Window size criterion for AWM; total CO_2 mass over FTP-75 and NEDC (evaluated at CARB El Monte chassis dynamometer laboratory for Vehicle A and B; taken from EPA certification document for Vehicle C)

Vehicle	CO_2 over FTP-75 [g]	CO_2 over NEDC [g]
Vehicle A	2921.9	1938.6
Vehicle B	2944.8	1841.8
Vehicle C	5042.5	5042.5 [1)]

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Thur 9/10/2015 4:13:53 PM
Subject: RE: PHEV data

thanks

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, September 10, 2015 11:44 AM
To: Rodgers, William (EEO); Allen, Gregory (EEO)
Subject: PHEV data

Here is the latest Cmax PHEV data:

http://iaspub.epa.gov/otaqpub/display_file.jsp?docid=33392&flag=1

page 24 starts the CD UDDS data. Unfortunately I think the UDDSs are out of order so it may confuse. Reviewing SAE 1711 (you should get it if you don't already) the end-of-test criterion is to run to a transition to CS UDDS and then continue running UDDSs until you meet the net SOC <1% criteria . **Ex. 4 - CBI**
SOC.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7 (EEO)
Sent: Thur 9/10/2015 5:43:00 PM
Subject: RE: Durability Ex. 4 - CBI

Hello Jim,

Thanks. Sorry, I wanted to call you this morning but the day got away from me with many other phone calls – all on the same topic. I heard from Byron you were putting together a list of questions, so if you have any don't hesitate to send them.

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, September 10, 2015 1:41 PM
To: Ex. 7 (EEO)
Subject: RE: Durability For Ex. 4 - CBI

Thanks for the addition data. I will review it tomorrow.

Jim

From: Ex. 7 @vw.com]
Sent: Thursday, September 10, 2015 1:28 PM
To: Snyder, Jim
Cc: Wehrly, Linc; Bunker, Byron; Ex. 7 @ARB'; Ex. 7 @arb.ca.gov'; Ex. 7 @ARB; Ex. 7 @arb.ca.gov)
Subject: Durability For Ex. 4 - CBI

Hello Jim,

Attached please find more details regarding the durability testing that Volkswagen carried out on

Ex. 4 - CBI

Thank you and best regards,

Ex. 7

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Werner, Jacqueline
Sent: Thur 9/10/2015 5:50:56 PM
Subject: Are you on the VW call?

Sent from my iPhone

Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Brooks, Phillip
Sent: Thur 9/10/2015 6:03:13 PM
Subject: Re: Are you on the VW call?

Yes

Sent from my iPhone

> On Sep 10, 2015, at 1:50 PM, Werner, Jacqueline <Werner.Jacqueline@epa.gov> wrote:
>
>
>
> Sent from my iPhone
>
> Jacqueline Robles Werner
> Associate Director
> Air Enforcement Division
> W: 202-564-1036

To: Shinkman, Susan[Shinkman.Susan@epa.gov]
From: Brooks, Phillip
Sent: Thur 9/10/2015 6:26:31 PM
Subject: Re: the meeting tomorrow morning with Cynthia

Did you see my "agenda"?

Sent from my iPhone

On Sep 10, 2015, at 2:25 PM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

Confirmed VW.

From: Brooks, Phillip
Sent: Thursday, September 10, 2015 10:07 AM
To: Shinkman, Susan
Subject: the meeting tomorrow morning with Cynthia

Ex. 5, 7

To: Shinkman, Susan[Shinkman.Susan@epa.gov]
From: Brooks, Phillip
Sent: Thur 9/10/2015 6:38:03 PM
Subject: Re: the meeting tomorrow morning with Cynthia

I think Chris is calling in. I think Byron is not available, but if he is it will be by phone.

Sent from my iPhone

On Sep 10, 2015, at 2:35 PM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

> Will Chris or Byron be there?
>
> **From:** Brooks, Phillip
> **Sent:** Thursday, September 10, 2015 2:33 PM
> **To:** Shinkman, Susan
> **Subject:** Re: the meeting tomorrow morning with Cynthia
>
> Evan will join us. Jacqueline will call in. While I am out of the office Evan is the primary contact for VW.
>
> Sent from my iPhone
>
> On Sep 10, 2015, at 2:30 PM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:
>
> > Yes – it seems to cover everything.
> >
> > **From:** Brooks, Phillip
> > **Sent:** Thursday, September 10, 2015 2:27 PM
> > **To:** Shinkman, Susan
> > **Subject:** Re: the meeting tomorrow morning with Cynthia
> >
> > Did you see my "agenda"?
> >
> > Sent from my iPhone

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Confirmed VW.

From: Brooks, Phillip
Sent: Thursday, September 10, 2015 10:07 AM
To: Shinkman, Susan
Subject: the meeting tomorrow morning with Cynthia

Ex. 5, 7

To: Shinkman, Susan[Shinkman.Susan@epa.gov]
From: Brooks, Phillip
Sent: Thur 9/10/2015 6:59:31 PM
Subject: Re: the meeting tomorrow morning with Cynthia

Ex. 5, 7

Sent from my iPhone

On Sep 10, 2015, at 2:35 PM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

> Will Chris or Byron be there?
>
> **From:** Brooks, Phillip
> **Sent:** Thursday, September 10, 2015 2:33 PM
> **To:** Shinkman, Susan
> **Subject:** Re: the meeting tomorrow morning with Cynthia
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> >
> > **From:** Brooks, Phillip
> > **Sent:** Thursday, September 10, 2015 2:27 PM
> > **To:** Shinkman, Susan
> > **Subject:** Re: the meeting tomorrow morning with Cynthia
> >
> > Did you see my "agenda"?

Sent from my iPhone

On Sep 10, 2015, at 2:25 PM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

> Confirmed VW.
>
> **From:** Brooks, Phillip
> **Sent:** Thursday, September 10, 2015 10:07 AM
> **To:** Shinkman, Susan
> **Subject:** the meeting tomorrow morning with Cynthia

Ex. 5, 7

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Shinkman, Susan
Sent: Thur 9/10/2015 7:01:52 PM
Subject: RE: the meeting tomorrow morning with Cynthia

I would leave it alone.

From: Brooks, Phillip
Sent: Thursday, September 10, 2015 3:00 PM
To: Shinkman, Susan
Subject: Re: the meeting tomorrow morning with Cynthia

Ex. 7

Sent from my iPhone

On Sep 10, 2015, at 2:35 PM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

> Will Chris or Byron be there?
>
> **From:** Brooks, Phillip
> **Sent:** Thursday, September 10, 2015 2:33 PM
> **To:** Shinkman, Susan
> **Subject:** Re: the meeting tomorrow morning with Cynthia
>
> Evan will join us. Jacqueline will call in. While I am out of the office Evan is the primary contact for VW.
>
> Sent from my iPhone
>
> On Sep 10, 2015, at 2:30 PM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:
>
> > Yes – it seems to cover everything.

From: Brooks, Phillip
Sent: Thursday, September 10, 2015 2:27 PM
To: Shinkman, Susan
Subject: Re: the meeting tomorrow morning with Cynthia

Did you see my "agenda"?

Sent from my iPhone

On Sep 10, 2015, at 2:25 PM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

> Confirmed VW.
>
> **From:** Brooks, Phillip
> **Sent:** Thursday, September 10, 2015 10:07 AM
> **To:** Shinkman, Susan
> **Subject:** the meeting tomorrow morning with Cynthia

Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 9/10/2015 7:25:54 PM
Subject: P.M. NEWSCAST: Cadillac fashions new ways to stand out | More range for Leaf EV | U.S. outsells China | Audi to aid refugees | Barra tops 'power' list

September 10, 2015

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Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 9/10/2015 7:26:22 PM
Subject: P.M. NEWSCAST: Cadillac fashions new ways to stand out | More range for Leaf EV | U.S. outsells China | Audi to aid refugees | Barra tops 'power' list

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Detroit, MI 48207-2997 United States
customerservice@autonews.com

From: Belser, Evan
Location: TBD
Importance: Normal
Subject: HOLD for EPA-ARB Civil Team Coordination on VW matter
Start Date/Time: Fri 9/18/2015 4:00:00 PM
End Date/Time: Fri 9/18/2015 9:00:00 PM

From: Belser, Evan
Location: 877.927.7861 Participant Code Non-Responsive
Importance: Normal
Subject: HOLD for EPA-ARB Civil Team Coordination on VW matter
Start Date/Time: Fri 9/18/2015 7:00:00 PM
End Date/Time: Fri 9/18/2015 8:00:00 PM

From: Ex. 7
Location: Skype Meeting
Importance: Normal
Subject: Diesel Discussion
Start Date/Time: Fri 9/11/2015 5:00:00 PM
End Date/Time: Fri 9/11/2015 6:30:00 PM

.....
,,,,,,

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

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Location: Skype Meeting
Importance: Normal
Subject: Diesel Discussion
Start Date/Time: Fri 9/11/2015 5:00:00 PM
End Date/Time: Fri 9/11/2015 6:30:00 PM

.....
,,,,,,

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Join by phone

Ex. 7 Auburn Hills) English (United States)
Auburn Hills) English (United States)
Auburn Hills) English (United States)
Auburn Hills) English (United States)

Find a local number

Conference ID: Non-Responsive

Forgot your dial-in PIN? | Help

From: Ex. 7 (EEO)
Location: Skype Meeting
Importance: Normal
Subject: Diesel Discussion
Start Date/Time: Fri 9/11/2015 5:00:00 PM
End Date/Time: Fri 9/11/2015 6:30:00 PM

.....
,,,,,,

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

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+1 (248) 630-0170 (Auburn Hills) English (United States)
+1 (248) 754-5055 (Auburn Hills) English (United States)
Find a local number
Conference ID: Non-Responsive
Forgot your dial-in PIN? | Help

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 9/10/2015 8:33:54 PM
Subject: DAILY: Cadillac XT5 gets a glitzy sneak peek in NYC | FCA recalls 1.7M trucks | Hyundai kicks off NFL sponsorship | Lincoln launches new McConaughey ads | Honda can test self-driving cars in Calif.

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Dodge joins the Star Wars promotional blitz with Stormtrooper Chargers

September 10, 2015

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Caddy gives New Yorkers a sneak peek of XT5 crossover -- from the air

Cadillac gave an unconventional sneak peek of its SRX replacement -- the XT5 crossover -- to a throng of New York fashionistas Wednesday night on the west side of Manhattan.

FCA issues three recalls for 1.7 million trucks

Fiat Chrysler Automobiles said it is recalling about 1.73 million trucks for defects including a wiring harness that may short-circuit and set off an airbag. The largest recall covers 1.06 million trucks in the U.S.

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UAW's last Tier 1 auto hire watches talks closely
UAW to select Detroit 3 target for contract negotiations by next week

Hyundai kicks off NFL advertising with gameday flag

Advertisement

Hyundai launches its NFL sponsorship today with a television ad airing during the regular-season opener between the New England Patriots and Pittsburgh Steelers. In June, Hyundai announced a four-year deal with the NFL, replacing GM, which had sponsored the NFL since 2001.

Toyota boosts mpg, interior space on retooled 2016 Prius

Jeep pickup ahead, diesel Wrangler possible

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Honda sets Cadillac patrol on MKX as McConaughey's spot debuts

Matthew McConaughey is back in the state of California to tout Lincoln, but this time, he's not pulling stunts, jetting around in Mexico or hanging from the Golden Gate Bridge. Instead, the actor who's been parodied endlessly, doesn't say a single word in three new spots for the redesigned MKX crossover.

Chevy prices revamped '16 Malibu from $22,500

China's BAIC opens r&d center in Silicon Valley

Nissan boosts 2016 Leaf's range to 107 miles

Urban Science buys AutoHook to expand lead-management services

BMW, other auto brands can benefit from YouTube 'fan videos,' report says

California lawmakers drop fuel economy provision from climate bill

U.S. tops China in auto sales for last two months

Daimler, BAIC in talks over Chinese carmaker taking possible stake, Zetsche says

Volvo will launch S90 to challenge BMW 5 series, Mercedes E class

Stant to close plant, open tech center in suburban Detroit

Tom Cole, longtime Michigan auto dealer, dies at 73

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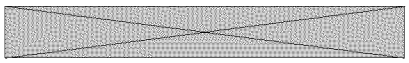

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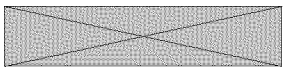
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive

» Oct. 7 at 2pm ET - Programmatic
by Rocket Fuel



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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 9/10/2015 8:34:16 PM
Subject: DAILY: Cadillac XT5 gets a glitzy sneak peek in NYC | FCA recalls 1.7M trucks | Hyundai kicks off NFL sponsorship | Lincoln launches new McConaughey ads | Honda can test self-driving cars in Calif.

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Jeep pickup ahead; diesel Wrangler possible

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Honda sets Cadillac attack on MKX as Lincoln gets quietest

Matthew McConaughey is back in the state of California to drive Lincoln's MKX crossover, but this time, he's not pitching a big game. Gone are the Greenlights, the Matthew-isms and the talking in third person. Instead, the Oscar winner is selling the MKX's technology in three new spots that, unlike the previous ads in which he was parodied endlessly, doesn't say a single word in three new spots for the redesigned MKX crossover.

Chevy prices revamped '16 Malibu from $22,500

China's BAIC opens r&d center in Silicon Valley

Nissan boosts 2016 Leaf's range to 107 miles

Urban Science buys AutoHook to expand lead-management services

BMW, other auto brands can benefit from YouTube 'fan videos,' report says

California lawmakers drop fuel economy provision from climate bill

U.S. tops China in auto sales for last two months

Daimler, BAIC in talks over Chinese carmaker taking possible stake, Zetsche says

Volvo will launch S90 to challenge BMW 5 series, Mercedes E class

Stant to close plant, open tech center in suburban Detroit

Tom Cole, longtime Michigan auto dealer, dies at 73

VIDEO: Florida father-son duo overhaul hiring, disrupt third-party threats

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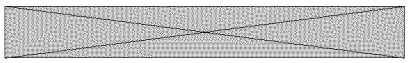
EVENTS

» Sept. 22 - NY Marketing Seminar

» Oct. 1 - Automobilwoche Kongress

» Oct. 14 - Best Dealerships To Work For

» Jan. 12 - Automotive News World Congress



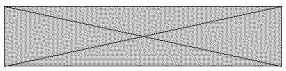
WEBINARS

» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive

» Oct. 7 at 2pm ET - Programmatic
by Rocket Fuel



» F&I Practices: How to Stay Out of Jail!

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1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Chapman, Apple[Chapman.Apple@epa.gov]
From: Brooks, Phillip
Sent: Thur 9/10/2015 10:29:22 PM
Subject: Re: Phone charger

Thank you. Brutal day expected for tomorrow. At some point I will bring you up to speed on VW.

Sent from my iPhone

> On Sep 10, 2015, at 5:54 PM, Chapman, Apple <Chapman.Apple@epa.gov> wrote:
>
> I left my door unlocked in case you need this tomorrow.
>
> Apple Chapman
> OECA
> Air Enforcement Division
> Sent from my iPhone
> 202-841-6076
>

To: McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Grundler, Christopher
Sent: Fri 9/11/2015 1:38:11 AM
Subject: Second VW Attachment
VW Outline for 9 11 15 meeting with CG and JM.docx
ATT00001.txt

Sorry--here is discussion outline for tomorrow's call

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE Member Connection
Sent: Fri 9/11/2015 9:44:39 AM
Subject: Open Forum Digest for Thursday September 10, 2015

[redacted]

Open Forum

Post New Message

Sep 10, 2015

started 14 hours ago, Matt Creech (0 replies)

Amazing Opportunity for Students: Travel Assistance Program for Research or Industry Placements Abroad!

1The International Federation of Automotive... ▣ Matt Creech

started 16 hours ago, Lindsay Silver (1 reply)

The STEM crisis--your thoughts?

2 Hi everyone, We posted this article < Lindsay Silver

3 Pay is a very powerful incentive. Jerry Alcone

started 20 hours ago, Edward Forrest (1 reply)

Hot Rodders...engineers of all types!!

4 Well...the IT-A AMC-Spirit-GT sits high on jack... Edward Forrest

5 You have an awesome project. If you are going... Jerry Alcone

started 3 days ago, Harold Clyde (3 replies)

Halogen bulb failure modes

6 Message Newel Stephens

started 4 days ago, Jerry Alcone (14 replies)

A real design challenge

7 Anybody that claims to be certain about

climate... Ray Kremer

8 Steven, There is nothing to update... Dennis Roitt

9 Steven, I followed your link to your... Dennis Roitt

started 6 days ago, Barry Duffin (4 replies)

CA Senate Bill 350 will destroy the automotive industry

10 Mark Twain's "the report of my death was an... Robert Gruszczynski

top next

1. Amazing Opportunity for Students: Travel Assistance Program for Research or Industry Placements Abroad!

Reply Reply

Sep 10, 2015 2:17 PM

Matt Creech

- Amazing Opportunity for Students: Travel Assistance Program for Research or Industry Placements Abroad!

The International Federation of Automotive Engineering Societies (FISITA) has a Travel Bursary program available that is designed to encourage more students to explore not only automotive engineering as a viable career path, but also to get them to engage with the industry on a global level. The program has grown year over the years and proven itself to be a valuable way of encouraging young people to engage with and join professional engineering societies.

The FISITA Travel Bursary offers funding for qualifying students that are taking part in industry or research placements around the world. Not only does FISITA provide students with financial assistance for their once in a lifetime trip, they also encourage them to work as hard as they can at their placements and immerse themselves in the local culture of their destination. FISITA has awarded bursaries to students from all over the world, ranging from Korea to Canada.

The deadline for the FISITA Travel Bursary is October 31, 2015, for students on placement between November 2015 and March 2016.

To be eligible to apply for FISITA Travel

Bursary a student must:

* Be studying engineering at an undergraduate or postgraduate level at a recognized college or university

* Have arranged an industry or research placement in an automotive company or organization overseas

* Be a member of SAE International or another FISITA member society

More information can be found at: www.YourFutureInAutomotive.com/travebursary

About FISITA: FISITA is the umbrella organization for the national automotive societies around the world. FISITA is a network of professional member societies

representing over 190,000 automotive engineers. Their goal is to provide a forum for dialogue amongst these engineers, as well as industry, government, academia, environmental and standards organizations. SAE International is a member of FISITA.

Matt Creech
Business Unit Leader - Membership
SAE International
Troy MI

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2. The STEM crisis--your thoughts?

-

Lindsay Silver

this article

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

3. Re: The STEM crisis--your thoughts?

Reply to Group | Reply to Sender

-

Jerry Alcone

Reply to Group Online View Thread
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Inappropriate

Original Message:
Sent: 09-10-2015 12:15
From: Lindsay Silver
Subject: The STEM crisis--your thoughts?

Hi everyone,

We posted this article from MOMENTUM yesterday, covering SAE's initiatives to grow interest in STEM topics among young people. As most of you probably know, if current trends continue, the shortage of highly-skilled workers in the U.S. will only get worse. It's imperative that we get more young men and women excited about technology engineering, math, and science.

I'd love to hear your thoughts on this issue. What got you interested in engineering? How do you think we can grow interest in young people?

Thanks for your thoughts!

Lindsay Silver
Community Manager
SAE International

---

4. Hot Rodders...engineers of all types!!

Reply Reply

Sep 10, 2015 8:10 AM

Edward Forrest

Well...the IT-A AMC-Spirit-GT sits high on jack stands. The straight-pipe is on the wall and the stainless steel headers (circa 1995...thanks, Jeep) look business like. AMC was rather creative, I learned by "hunt and peck" through the local "PullaPart". The downpipe fits nicely under the frame of the 1981 car...that Walker claims fits the 1995 Jeep Cherokee!

Pipe is snug to the unibody...and...get this...hanging at the end of it is a l-o-v-e-l-y 31" Thrush glasspack. OK...before I finish this...and remember this is mostly for the benefit of

my wife and the neighbors...I
need to be pointed in the right direction.
(The only cars I ever built
were "race cars" so some of these things
just didn't matter!!)

1.) Know that the engine is on solid
mounts and there is also a stabilizer
bar to accomodate torque from the ++4.2
litre engine.

Having said that...in general...does an
exhaust system "float" when it is
mounted in a contemporary car? That
is...with engine movement...does the
exhaust system also move? Do I worry
about the pipes being "too
tight"...I guess at this point...why, huh?

(If I mount it too tightly against the floor
board...but then...there is no

seat there anyway. Maybe blister paint. Is there a replacement...for asbestos!!??)

2.) Weld the Thrush...or...clamp it with one of those $9.95 clamps and gaskets? Being a chemical guy (also fiber optics) I am always intrigued with some of the things that are on the market other than a welding rod!!

Thanks...can't wait to hear the Thrush!! Amazing they are still available...and for $22.00...what a blast!

3.) I just might get a plate for this thing and take it for a ride...

ed

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top previous next

5. Re: Hot Rodders...engineers of all types!!

Reply to Group | Reply to Sender

-

Jerry Alcone

'

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6. Re: Halogen bulb failure modes

Newel Stephens

Newel Stephens
Principal Optical Engineer
Honeywell Aerospace
Urbana OH

The bulb manufacturers used to publish summaries of such material in the front of their catalogs. Now that they have all gone online, it is harder to find that kind of information. Here is a link to one document I found:
https://assets.sylvania.com/assets/Docume
950e-4995-a67e-ceddfc343c65.pdf

http://www.lrc.rpi.edu/

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---

Original Message:
Sent: 09-07-2015 09:19
From: Harold Clyde
Subject: Halogen bulb failure modes

Does anyone know of technical litature on the failure modes of halogen bulbs? In particular I am looking for the effect of contaminants on the glass bulbs. This would be fingerprints, salts, grease, etc..., and/or the effect of usage and age on the glass structure.

Published articles in SAE, ASME, textbooks, other professional journals or publication is what I am searching for.

Thanks for the input.

Harold Clyde

---

top previous next

7. Re: A real design challenge

Reply Reply

Sep 10, 2015 12:20 PM

Ray Kremer

Anybody that claims to be certain about climate change is more concerned with the policy changes they can push through using it as a justification than they are about proper peer reviewed science. This kind of subject is especially difficult because reproducible experimentation is impossible, and we don't know how much we don't know about all the factors that contribute to our very complex atmospheric systems.

And frankly there are a lot of people eager to push through certain policies using any justification they can get their hands on, even incomplete science, as

long as it helps them sell it to the public.

The global climate has been changing all on its own long before the internal combustion engine was around. Among non-politically motivated scientists, the jury is still out on whether man-made effects are negligible compared to natural effects, or vice versa, or something in-between.

Ray Kremer
Manager
Stellar Solutions
McHenry IL

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Original Message:
Sent: 09-06-2015 09:29
From: Jerry Alcone
Subject: A real design challenge

How can we start to correct the atmosphere to mitigate climate change?

What needs to be removed?

How do we remove it?

What can we do with it when we remove it?

How can we make a profit while removing it?

Example - remove CO2, liquify and use it

for fracking instead of water based approach. I have no idea if this would even remotely stand a chance of working but you get the idea.

Keep your IP and make a fortune

Jerry Alcone
Retired
Albuquerque NM

---

top previous next

8. Re: A real design challenge

Reply to Reply to

Sep 10, 2015 3:07 PM

Dennis Roitt

Steven,

There is nothing to update concerning the last Solar Minima. It is in the past now and in the records. Earth got colder, now warming up again. Comment?

You assert that July was the warmest global temperature on record. What does that prove? Mars is warmer too. Taking a temperature does not reveal the mechanism behind it. I don't need to update the dust bowl either. It happened already, it was recorded and involved the hottest summer in US history. Do you know of a hotter one? Can you explain Mars?

Many of the "Climate Scientists" were discredited in the UN e-mail scandal (Climate-gate) for making up fictitious numbers. Many others, feel that the man made contributions are not that significant. Notice that I am not saying negligible but significant. The founder of the Weather Channel is furious that global warming activists have "highjacked it" (sic). Where does "98%" come from?

And regarding the timeline of the planet, we are very cold right now. Beneath the snow and ice in Antartica are tropical plants. All of this carbon we are afraid of was in the air long before it was trapped in coal and oil.

I do agree that we cannot and should not

do the unsustainable. But lets proceed with reason, caution and a longer view. I have an organic farm because I think it is unsustainable and unheathy that we dump over one billion pounds of pesticide onto our farm fields in the US, every year! I am more worried about the fact that every drop of drinking water in the United States has some level of pesticide in it than I am about cabon dioxide, which I breathe out every few seconds. Or the explosion of Autism, diabetes, ADHD, asthma and allergies among our children to unprecidented levels.

Now there is a design challenge!

Dennis Roitt
Associate Engineer-Design
Oshkosh Corporation

OSHKOSH WI

Dennis Roitt
Associate Engineer-Design
Oshkosh Corporation
OSHKOSH WI

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9. Re: A real design challenge

Sep 10, 2015 3:34 PM

Dennis Roitt

Steven,

I followed your link to your reliable information and Whoa! We DO NOT have a 136 year record of global temperature. Real, true and reliable global temperatures were not available until NASA launched weather satelites. Before then we had weather stations. We did not have them in places that were hard to get to. Some stations started in an isolated field, but through the years cities grew up around them and corrupted their data. Some have good data, but not of the quality and coverage needed to construct

global temperatures previous to satelites. Ocean temperature is a huge part of our climate and no one manned a weather station in the ocean! So ocean temperatures previous to satelites are only theoretical.

But even at that, who denies that the Earth is warming up? Several thousand years late to that party!

(As for me, I am looking forward to the El Nino winter this year.)

Dennis Roitt
Associate Engineer-Design
Oshkosh Corporation
OSHKOSH WI

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Original Message:
Sent: 09-10-2015 15:06
From: Dennis Roitt
Subject: A real design challenge

Steven,

There is nothing to update concerning the last Solar Minima. It is in the past now and in the records. Earth got colder, now warming up again. Comment?

You assert that July was the warmest global temperature on record. What does that prove? Mars is warmer too. Taking a temperature does not reveal the

mechanism behind it. I don't need to update the dust bowl either. It happened already, it was recorded and involved the hottest summer in US history. Do you know of a hotter one? Can you explain Mars?

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And regarding the timeline of the planet, we are very cold right now. Beneath the

snow and ice in Antartica are tropical plants. All of this carbon we are afraid of was in the air long before it was trapped in coal and oil.

I do agree that we cannot and should not do the unsustainable. But lets proceed with reason, caution and a longer view. I have an organic farm because I think it is unsustainable and unheathy that we dump over one billion pounds of pesticide onto our farm fields in the US, every year! I am more worried about the fact that every drop of drinking water in the United States has some level of pesticide in it than I am about cabon dioxide, which I breathe out every few seconds. Or the explosion of Autism, diabetes, ADHD, asthma and allergies among our children to unprecidented levels.

Now there is a design challenge!

Dennis Roitt
Associate Engineer-Design
Oshkosh Corporation
OSHKOSH WI

Dennis Roitt
Associate Engineer-Design
Oshkosh Corporation
OSHKOSH WI

Re: CA Senate Bill 350 will destroy the automotive industry

Sep 10, 2015 8:01 AM

Robert Gruszczynski

Mark Twain's "the report of my death was an exaggeration. " comes to mind...

Remarks by Senate President pro Tempore Kevin de León at a Press Conference on SB 350

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Original Message:
Sent: 09-05-2015 08:26
From: Jim Lawrence
Subject: CA Senate Bill 350 will destroy the automotive industry

Like most of the California initiatives, it will not destroy the automotive industry.

You will just pay for the technology. Power of the pen may transfer from the emotional electorate to the clueless employees as has in the past. You already pay more for electricity since closing the power plants and purchasing out of state electricity. Maybe it is time to revisit the past and learn from history. Lets pick up our guitar, dress in colorful clothes and sing while standing on the corner of Haight and Ashbury.

Jim Lawrence
Retired
Summerfield NC

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To: Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Starfield, Lawrence[Starfield.Lawrence@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]; Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Brooks, Phillip
Sent: Fri 9/11/2015 10:37:36 AM
Subject: Fwd: Draft Background Slides for Janet/Cynthia call
ATT00001.htm

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 10, 2015 at 9:54:49 PM EDT
To: "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Subject: Fwd: Draft Background Slides for Janet/Cynthia call

Hi Phil,

Attached are some background slides we can use tomorrow if we need. Chris has forwarded the slides to Janet.

Talk with you tomorrow at 8.

Thanks,

Byron

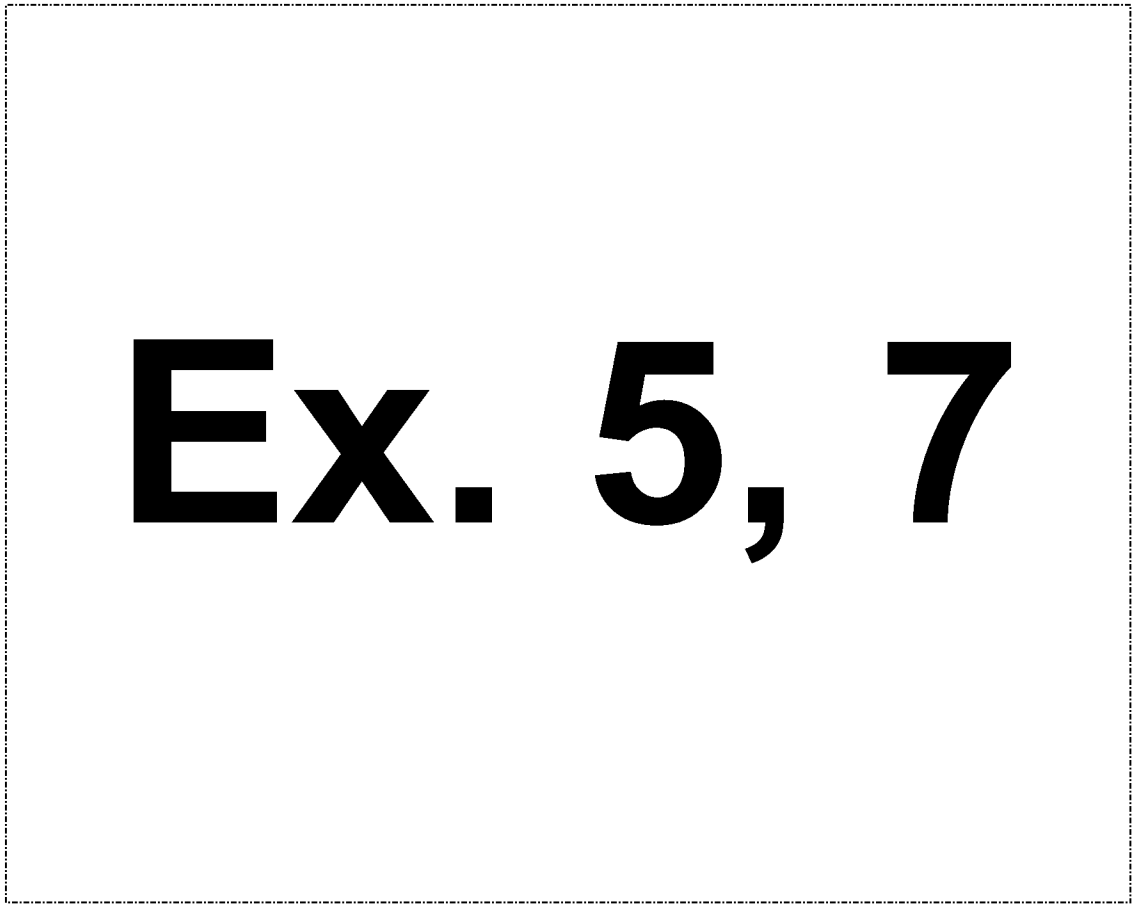
Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Cell Phone (734) 353-9623

Sent from my cell phone.

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
To: "Grundler, Christopher" <grundler.christopher@epa.gov>
Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Cook, Leila" <cook.leila@epa.gov>, "Wehrly, Linc" <wehrly.linc@epa.gov>
Subject: Draft Background Slides for Janet/Cynthia call

Chris,



Thanks,

Byron

****

Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623

****

To: Shinkman, Susan[Shinkman.Susan@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Brooks, Phillip
Sent: Fri 9/11/2015 11:10:00 AM
Subject: Fwd: updated VW Discussion Topics for this AM
VW Outline for 9.11.15 meeting with CG and JM.docx
ATT00001.htm

I was not able to do a real agenda that incorporate the background material that Byron has put together. So we will have to simply work on the fly this morning. The attachment with this email was sent from my home email because I do not have a work computer due to the refresh.

Sent from my iPhone

Begin forwarded message:

From: Phillip Brooks Ex. 6
Date: September 11, 2015 at 7:04:10 AM EDT
To: "Brooks, Phillip" <brooks.phillip@epa.gov>

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Shinkman, Susan
Sent: Fri 9/11/2015 11:43:56 AM
Subject: Re: updated VW Discussion Topics for this AM

I am in with computer. Will print copies.

On Sep 11, 2015, at 7:10 AM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

> I was not able to do a real agenda that incorporate the background material that Byron has put together. So we will have to simply work on the fly this morning. The attachment with this email was sent from my home email because I do not have a work computer due to the refresh.
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> **From:** Phillip Brooks <pabmah1@gmail.com>
> **Date:** September 11, 2015 at 7:04:10 AM EDT
> **To:** "Brooks, Phillip" <brooks.phillip@epa.gov>
>
> <VW Outline for 9.11.15 meeting with CG and JM.docx>

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Shinkman, Susan
Sent: Fri 9/11/2015 11:48:50 AM
Subject: RE: updated VW Discussion Topics for this AM

Sorry – I cannot get his slides open on my computer.

From: Brooks, Phillip
Sent: Friday, September 11, 2015 7:10 AM
To: Shinkman, Susan; Grundler, Christopher; Bunker, Byron
Subject: Fwd: updated VW Discussion Topics for this AM

I was not able to do a real agenda that incorporate the background material that Byron has put together. So we will have to simply work on the fly this morning. The attachment with this email was sent from my home email because I do not have a work computer due to the refresh.

Sent from my iPhone

Begin forwarded message:

From: Phillip Brooks <Ex. 6
Date: September 11, 2015 at 7:04:10 AM EDT
To: "Brooks, Phillip" <brooks.phillip@epa.gov>

From: Kaul, Meetu
Location: TBD
Importance: Normal
Subject: Accepted: HOLD for EPA-ARB Civil Team Coordination on VW matter
Start Date/Time: Fri 9/18/2015 4:00:00 PM
End Date/Time: Fri 9/18/2015 9:00:00 PM

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Bunker, Byron
Sent: Fri 9/11/2015 11:54:31 AM
Subject: RE: updated VW Discussion Topics for this AM
VW Diesel Background 9-11-2015.pdf

Attached is a PDF version. It might work better.

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Brooks, Phillip
Sent: Friday, September 11, 2015 7:52 AM
To: Bunker, Byron
Subject: Re: updated VW Discussion Topics for this AM

I forwarded the slides this morning. But I just got an email from Susan saying she is unable to open them. I do not know what the problem is. I will take the lead and count on you to interject

Ex. 5, 7

Sent from my iPhone

On Sep 11, 2015, at 7:49 AM, Bunker, Byron <bunker.byron@epa.gov> wrote:

Hi Phil,

I can't tell if anyone forwarded the background slides to Cynthia. Chris sent them to Janet, and I sent them to you.

Given the focus on schedule and next steps, they may not be useful for this morning's meeting, but it would probably be good for Janet and Cynthia to have the same reference to the underlying technical issues.

Can you forward them to Cynthia if you haven't already? If you want, I can do it.

Ex. 5, 7

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Brooks, Phillip
Sent: Friday, September 11, 2015 7:10 AM
To: Shinkman, Susan; Grundler, Christopher; Bunker, Byron
Subject: Fwd: updated VW Discussion Topics for this AM

I was not able to do a real agenda that incorporate the background material that Byron has put together. So we will have to simply work on the fly this morning. The attachment with this email was sent from my home email because I do not have a work computer due to the refresh.

Sent from my iPhone

Begin forwarded message:

From: Phillip Brooks <Ex. 6
Date: September 11, 2015 at 7:04:10 AM EDT
To: "Brooks, Phillip" <brooks.phillip@epa.gov>

To: Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7 (EEO)
Sent: Fri 9/11/2015 1:21:35 PM
Subject: Meeting at 1:00

Hello Guys,

I am planning to come out to your office this afternoon for the meeting today.

If that doesn't work for you, please let me know.

Thanks,

Ex. 7

From: Belser, Evan
Location: Non-Responsive
Importance: Normal
Subject: HOLD for EPA-ARB Civil Team Coordination on VW matter
Start Date/Time: Fri 9/18/2015 4:00:00 PM
End Date/Time: Fri 9/18/2015 9:00:00 PM

From: Belser, Evan
Location: Non-Responsive Participant Code Non-Responsive
Importance: Normal
Subject: HOLD for EPA-ARB Civil Team Coordination on VW matter
Start Date/Time: Fri 9/18/2015 7:00:00 PM
End Date/Time: Fri 9/18/2015 8:00:00 PM

From: Kaul, Meetu
Location: 877.927.7861 Participant Code Non-Responsive
Importance: Normal
Subject: Accepted: HOLD for EPA-ARB Civil Team Coordination on VW matter
Start Date/Time: Fri 9/18/2015 7:00:00 PM
End Date/Time: Fri 9/18/2015 8:00:00 PM

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Fri 9/11/2015 1:58:44 PM
Subject: Re: VW Projected Sales

Thanks Greg.

I will pass this on to OTAQ and ask them to comment/supplement.

From: Orehowsky, Gregory
Sent: Friday, September 11, 2015 9:56 AM
To: Kaul, Meetu
Cc: Belser, Evan
Subject: VW Projected Sales

Ex. 5, 7

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Shinkman, Susan[Shinkman.Susan@epa.gov]
From: Giles-AA, Cynthia
Sent: Fri 9/11/2015 2:32:16 PM
Subject: RE: Draft Background Slides for Janet/Cynthia call

Pls resend asap. Don't see attachment and old email has disappeared from my inbox. Tx

From: Brooks, Phillip
Sent: Friday, September 11, 2015 6:38 AM
To: Giles-AA, Cynthia; Starfield, Lawrence; Shinkman, Susan; Kelley, Rosemarie; Belser, Evan; Werner, Jacqueline
Subject: Fwd: Draft Background Slides for Janet/Cynthia call

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 10, 2015 at 9:54:49 PM EDT
To: "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Subject: Fwd: Draft Background Slides for Janet/Cynthia call

Hi Phil,

Attached are some background slides we can use tomorrow if we need. Chris has forwarded the slides to Janet.

Talk with you tomorrow at 8.

Thanks,

Byron

Byron Bunker

US EPA

NVFEL Office Phone (734) 214-4155

DC Office Phone (202) 343-9283

Cell Phone (734) 353-9623

Sent from my cell phone.

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
To: "Grundler, Christopher" <grundler.christopher@epa.gov>
Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Cook, Leila" <cook.leila@epa.gov>, "Wehrly, Linc" <wehrly.linc@epa.gov>
Subject: Draft Background Slides for Janet/Cynthia call

Ex. 5, 7

Ex. 5, 7

****

Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623

****

To: Ex. 7 @vw.com]
Cc: Bunker, Byron[bunker.byron@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Wehrly, Linc
Sent: Fri 9/11/2015 2:33:18 PM
Subject: Re: Meeting at 1:00

Stuart,

That would be fine. See you then.

Linc

Sent from my iPhone

On Sep 11, 2015, at 9:21 AM, Ex. 7 @vw.com> wrote:

Hello Guys,

I am planning to come out to your office this afternoon for the meeting today.

If that doesn't work for you, please let me know.

Thanks,

Ex. 7

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Linc Wehrly[Wehrly.Linc@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Ball, Joel[ball.joel@epa.gov]
From: Snyder, Jim
Sent: Fri 9/11/2015 2:39:13 PM
Subject: VW Diesel Test Groups and sales volumes
VW Diesel test groups.xlsx

Attached are test groups and volumes per year for recent VW Diesels.

Total volume is Ex. 4 - CBI units

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Shinkman, Susan
Sent: Fri 9/11/2015 3:31:42 PM
Subject: VW

Cynthia wants to talk to us – soon – don't know exactly – will let you know.

Susan Shinkman

Director, Office of Civil Enforcement

U.S. Environmental Protection Agency

Washington, DC

202-564-3257

This email is for the intended recipient only and may contain material that is privileged and/or confidential. If you believe you have received this email in error, please notify the sender. Thank you.

To: Shinkman, Susan[Shinkman.Susan@epa.gov]
From: Brooks, Phillip
Sent: Fri 9/11/2015 3:54:16 PM
Subject: Re: VW

Ok.

Sent from my iPhone

On Sep 11, 2015, at 11:31 AM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

> Cynthia wants to talk to us – soon – don't know exactly – will let you know.
>
> Susan Shinkman
>
> Director, Office of Civil Enforcement
>
> U.S. Environmental Protection Agency
>
> Washington, DC
>
> 202-564-3257

This email is for the intended recipient only and may contain material that is privileged and/or confidential. If you believe you have received this email in error, please notify the sender. Thank you.

To: Walter Benjamin Fisherow[Walter.Benjamin.Fisherow@usdoj.gov]
From: Brooks, Phillip
Sent: Fri 9/11/2015 4:32:44 PM
Subject: Fwd: updated VW Discussion Topics for this AM
VW Diesel Background 9-11-2015.pdf
ATT00001.htm

These are simple and useful. We are ready to brief you and John at your convenience today or thereafter. We would like to invite Byron Bunker of OTAQ to provide additional background if he is available.

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 11, 2015 at 7:54:31 AM EDT
To: "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Subject: RE: updated VW Discussion Topics for this AM

Attached is a PDF version. It might work better.

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Brooks, Phillip
Sent: Friday, September 11, 2015 7:52 AM
To: Bunker, Byron
Subject: Re: updated VW Discussion Topics for this AM

I forwarded the slides this morning. But I just got an email from Susan saying she is unable to open them. I do not know what the problem is. I will take the lead and count on you to interject as necessary and to cover the technical and COC related issues

Sent from my iPhone

On Sep 11, 2015, at 7:49 AM, Bunker, Byron <bunker.byron@epa.gov> wrote:

> Hi Phil,
>
> I can't tell if anyone forwarded the background slides to Cynthia. Chris sent them to Janet, and I sent them to you.
>
> Given the focus on schedule and next steps, they may not be useful for this morning's meeting, but it would probably be good for Janet and Cynthia to have the same reference to the underlying technical issues.
>
> Can you forward them to Cynthia if you haven't already? If you want, I can do it.
>
> My assumption is that I will follow Cynthia and your lead on the call this morning. I am glad to go through any topic that you want, but I am not presuming that I need to drive any particular issue this morning.
>
> Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Brooks, Phillip
Sent: Friday, September 11, 2015 7:10 AM
To: Shinkman, Susan; Grundler, Christopher; Bunker, Byron
Subject: Fwd: updated VW Discussion Topics for this AM

I was not able to do a real agenda that incorporate the background material that Byron has put together. So we will have to simply work on the fly this morning. The attachment with this email was sent from my home email because I do not have a work computer due to the refresh.

Sent from my iPhone

Begin forwarded message:

From: Phillip Brooks **Non-Responsive**
Date: September 11, 2015 at 7:04:10 AM EDT

To: "Brooks, Phillip" <brooks.phillip@epa.gov>

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7
Sent: Fri 9/11/2015 4:51:15 PM
Subject: RE: Can we talk after the VW meeting?

Ex. 7 on too?

Ex. 7

Emissions Compliance, Automotive Regulations and Science (ECARS) Division

California Air Resources Board

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, September 11, 2015 9:47 AM
To: Ex. 7
Subject: Can we talk after the VW meeting?

Hi Ex. 7

Can we talk after the VW meeting? Ideally, I would like to loop Ex. 7 in too. Same discussion we have been having, but I now know a little more.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Ex. 7
From: Bunker, Byron
Sent: Fri 9/11/2015 5:06:47 PM
Subject: RE: Diesel Discussion

Hi Ex. 7

Look for a note from me. Apparently VW's system isn't working.

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ex. 7
Sent: Friday, September 11, 2015 1:06 PM
To: Ex. 7
Cc: Bunker, Byron; Wehrly, Linc; Snyder, Jim; Ex. 7

Ex. 7

Ex. 7

Subject: Re: Diesel Discussion

Arb is not getting in with if code

Sent from my ARB iPhone

On Sep 11, 2015, at 3:23 AM, Ex. 7 wrote:

Hello Ex. 7

This should just be a conference call and you can use the call in number and conference ID.

Talk to you later today,

Ex. 7

From: Ex. 7
Sent: Thursday, September 10, 2015 7:46 PM
To: Ex. 7 bunker.byron@epa.gov; wehrly.linc@epa.gov; Snyder, Jim (Snyder.Jim@epa.gov); Ex. 7
Ex. 7
Ex. 7
Subject: RE: Diesel Discussion

We may need a call in for this for us in CA. No skype meeting option that I am aware of.

Ex. 7

Emissions Compliance, Automotive Regulations and Science (ECARS) Division

California Air Resources Board

Ex. 7

Ex. 7

-----Original Appointment-----
From: Ex. 7
Sent: Thursday, September 10, 2015 1:01 PM
To: Ex. 7 bunker.byron@epa.gov; wehrly.linc@epa.gov; Snyder, Jim (Snyder.Jim@epa.gov); Ex. 7
Ex. 7
Ex. 7
Subject: Diesel Discussion
When: Friday, September 11, 2015 1:00 PM-2:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Skype Meeting

→ Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

Ex. 7	(Auburn Hills)	English (United States)
	(Auburn Hills)	English (United States)
	(Auburn Hills)	English (United States)
	(Auburn Hills)	English (United States)

Find a local number

Conference ID: Ex. 7

Forgot your dial-in PIN?|Help

{!OC{1033}!}

.....

To: Bunker, Byron[bunker.byron@epa.gov]
From: Veldten, Burkhard (EAEF/4)
Sent: Fri 9/11/2015 5:17:41 PM
Subject: Automatic reply: New call in number

Ich bin bis zum 25.09. nicht im Haus.Ich bin auf meinem Handy unter Ex. 6
erreichbar. Es vertritt mich Holger Loof Tel.4 Ex. 6
MfG Burkhard Veldten

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Snyder, Jim
Sent: Fri 9/11/2015 8:00:48 PM
Subject: the US cognizant technical representative:

VP/Senior Official

Engineering and Environmental Office
3800 Hamlin Road
Auburn Hills, Michigan 48326
United States

Ex. 7

2015-05-
Ex. 7

Mailing Information

All information should be mailed in duplicate to the US

cognizant technical representative:

name: Ex. 7

title: Ex. 7

address: Volkswagen Group of America, Inc.

3800 Hamlin Road EEO

Auburn Hills, MI 48326

PHONE: Ex. 7

Ex. 7

2015-05-18

From: Orehowsky, Gregory
Sent: Friday, September 11, 2015 2:55 PM
To: Snyder, Jim
Subject: RE: VW Diesel Test Groups and sales volumes

Jim:

Was a 9VWXV02.035N Test group certified? I don't see it on your list

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

From: Snyder, Jim
Sent: Friday, September 11, 2015 10:55 AM
To: Orehowsky, Gregory
Cc: Kaul, Meetu
Subject: RE: VW Diesel Test Groups and sales volumes

We can do that. I have a mtg to 2:30. 3 is okay if I don't get more urgent assignments today.

From: Orehowsky, Gregory
Sent: Friday, September 11, 2015 10:51 AM
To: Snyder, Jim
Cc: Kaul, Meetu
Subject: RE: VW Diesel Test Groups and sales volumes

Jim:

Thanks for the sales information

Ex. 5, 7

Can we give you a call this afternoon or is there some other time which works?

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

From: Snyder, Jim
Sent: Friday, September 11, 2015 10:39 AM
To: Orehowsky, Gregory; Bunker, Byron; Wehrly, Linc; Wright, DavidA; Ball, Joel
Subject: VW Diesel Test Groups and sales volumes

Attached are test groups and volumes per year for recent VW Diesels.

Total volume is Ex. 4 - CBI units

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency

(734) 214-4946
snyder.jim@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Bunker, Byron
Sent: Fri 9/11/2015 8:28:03 PM
Subject: Time to talk VW?

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Belser, Evan
Sent: Fri 9/11/2015 9:19:03 PM
Subject: RE: Draft Background Slides for Janet/Cynthia call

Can you please resend with the attached presentation? The attachment has somehow gone missing.

Thanks,
Evan

From: Brooks, Phillip
Sent: Friday, September 11, 2015 6:38 AM
To: Giles-AA, Cynthia; Starfield, Lawrence; Shinkman, Susan; Kelley, Rosemarie; Belser, Evan; Werner, Jacqueline
Subject: Fwd: Draft Background Slides for Janet/Cynthia call

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 10, 2015 at 9:54:49 PM EDT
To: "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Subject: Fwd: Draft Background Slides for Janet/Cynthia call

Hi Phil,

Attached are some background slides we can use tomorrow if we need. Chris has forwarded the slides to Janet.

Talk with you tomorrow at 8.

Thanks,

Byron

Byron Bunker

US EPA

NVFEL Office Phone (734) 214-4155

DC Office Phone (202) 343-9283

Cell Phone (734) 353-9623

Sent from my cell phone.

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
To: "Grundler, Christopher" <grundler.christopher@epa.gov>
Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Cook, Leila" <cook.leila@epa.gov>, "Wehrly, Linc" <wehrly.linc@epa.gov>
Subject: Draft Background Slides for Janet/Cynthia call

Ex. 5, 7

Please let me know if you have any edits and if you want me to forward these for the meeting. I am planning to join the call at 8. Please let me know if you would prefer that I not join.

Thanks,

Byron

****

Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623

****

To: Ex. 7 @vw.com]
Cc: Ex. 7 @arb.ca.gov]; Ex. 7 Ex. 7 @arb.ca.gov]; Ex. 7 @arb.ca.gov]; Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7 @ARB
Sent: Fri 9/11/2015 9:22:12 PM
Subject: Conditional EO Request
wem2015-9-11 DRAFT Conditional EO Request Letter JL.docx

Ex. 7,

As we discussed the other day, VW indicated an interest in getting a conditional EO from ARB to sell its diesel vehicles in California. Attached is a template of a letter you may use to request a conditional executive order. we are currently working on the language that will be incorporated into the draft EO. I expect to send that to you later this afternoon for your review. if you have any questions, call me.

Thanks

Ex. 7

Ex. 7

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Fri 9/11/2015 9:55:55 PM
Subject: Fwd: pdfs of Bunker's slides
VW Diesel Background 9-11-2015.pdf
ATT00001.htm

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

Begin forwarded message:

From: "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Date: September 11, 2015 at 5:20:21 PM EDT
To: "Belser, Evan" <Belser.Evan@epa.gov>, "Kaul, Meetu" <Kaul.Meetu@epa.gov>
Subject: pdfs of Bunker's slides

From: Bunker, Byron
Sent: Friday, September 11, 2015 7:55 AM
To: Brooks, Phillip
Subject: RE: updated VW Discussion Topics for this AM

Attached is a PDF version. It might work better.

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Brooks, Phillip
Sent: Friday, September 11, 2015 7:52 AM
To: Bunker, Byron
Subject: Re: updated VW Discussion Topics for this AM

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Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Brooks, Phillip
Sent: Friday, September 11, 2015 7:10 AM
To: Shinkman, Susan; Grundler, Christopher; Bunker, Byron
Subject: Fwd: updated VW Discussion Topics for this AM

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Sent from my iPhone

Begin forwarded message:

From: Phillip Brooks <pabmah1@gmail.com>
Date: September 11, 2015 at 7:04:10 AM EDT
To: "Brooks, Phillip" <brooks.phillip@epa.gov>

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE Member Connection
Sent: Sat 9/12/2015 9:46:16 AM
Subject: Open Forum Digest for Friday September 11, 2015

[redacted]

Open Forum

Post New Message

Sep 11, 2015

started yesterday, Matt Creech (1 reply)

Amazing Opportunity for Students: Travel Assistance Program for Research or Industry Placements Abroad!

1Anything like this for old farts? Jerry Alcone

started yesterday, Lindsay Silver (9 replies)

The STEM crisis--your thoughts?

2To amplify there is no stem crisis, more...

Jerry Alcone

3 Good article, but the issue is always the same William McClung

4 The STEM shortage is a manufactured one here in... Peter Gross

5 Agree, people that make good engineers are smart... Jerry Alcone

6 To promote interest in STEM, we need to... Peter Curless

7 It's important to understand that "highly... Michael Czajka

8 I agree with Peter Curless. I attended a magnet... Emmanuel Jay Manuel

9 From my perspective as a young working engineer... Timothy Spath

started yesterday, Edward Forrest (6 replies)

Hot Rodders...engineers of all types!!

10 I remember George Tripplet running one of these... Peter Gross

1 Thank you, Jerry...I admire your background and... Edward Forrest

1 Hello, Peter...my immense joy was picking on... Edward Forrest

1 Since at least 1989, GM, Ford, and Chrysler mini... Peter Vorum

1 Yea my S10 has a version of that seems to work... Jerry Alcone

started 2 days ago, Pete Garcia (1 reply)

Holley Hydramat, Fuel Pickup - Underlaying physics, theory?

1 Thanks Pete for bringing this to everyone's... Jerry Alcone

started 5 days ago, Jerry Alcone (16 replies)

A real design challenge

1 Again, I am not interested in why we are having... Jerry Alcone

1 Figure out the commercial link to volume CCS and... Rick Kerner

started 7 days ago, Barry Duffin (5 replies)

CA Senate Bill 350 will destroy the automotive industry -

18Dollar Democracy has spoken again.

Jerry Alcone

top next

1. Re: Amazing Opportunity for Students: Travel Assistance Program for Research or Industry Placements Abroad!

Reply to Group | Reply to Sender

-

Jerry Alcone

'

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

www.YourFutureInAutomotive.com/travebursary

About FISITA: FISITA is the umbrella organization for the national automotive societies around the world. FISITA is a network of professional member societies representing over 190,000 automotive engineers. Their goal is to provide a forum for dialogue amongst these engineers, as well as industry, government, academia, environmental and standards organizations. SAE International is a member of FISITA.

Matt Creech

Business Unit Leader - Membership
SAE International
Troy MI

---

top previous next

2. Re: The STEM crisis--your thoughts?

Reply to Group | Reply to Sender

-

Jerry Alcone

'

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

top previous next

3. Re: The STEM crisis--your thoughts?

Reply to Group | Reply to Sender

William McClung

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

top previous next

4. Re: The STEM crisis--your thoughts?

Reply to Group | Reply to Sender

-

Peter Gross

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

this article from MOMENTUM yesterday, covering SAE's initiatives to grow interest in STEM topics among young people. As most of

you probably know, if current trends continue, the shortage of highly-skilled workers in the U.S. will only get worse. It's imperative that we get more young men and women excited about technology engineering, math, and science.

I'd love to hear your thoughts on this issue. What got you interested in engineering? How do you think we can grow interest in young people?

Thanks for your thoughts!

Lindsay Silver
Community Manager
SAE International

---

5. Re: The STEM crisis--your thoughts?

-

Jerry Alcone

'

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

6. Re: The STEM crisis--your thoughts?

-

Peter Curless

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

7. Re: The STEM crisis--your thoughts?

-

Michael Czajka

'

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

this article from MOMENTUM yesterday, covering SAE's initiatives to grow interest in STEM topics among young people. As most of you probably know, if current trends continue, the shortage of highly-skilled workers in the U.S. will only get worse. It's imperative that we get more young men and women excited about technology engineering, math, and science.

I'd love to hear your thoughts on this issue. What got you interested in engineering? How do you think we can grow interest in young people?

Thanks for your thoughts!

Lindsay Silver
Community Manager
SAE International

---

8. Re: The STEM crisis--your thoughts?

-

Emmanuel Jay Manuel

Reply to Group Online View Thread
Recommend Forward Flag as
Inappropriate

top previous next

9. Re: The STEM crisis--your thoughts?

Reply Reply

Sep 11, 2015 10:31 AM

Timothy Spath

From my perspective as a young working engineer that came of age during the recession, despite the earlier comments in this thread, pay and job security definitely are perks to entering engineering. Many of my friends with other degrees (or no degrees) are still struggling to find work or underemployed while most of my engineering friends are pretty comfortable. I could go into more detail on that, but I think the intent of this conversation was to get an idea of things that SAE can influence to encourage young people to pursue STEM careers.

For me the biggest factors in pursuing an

engineering career were probably having many relatives who were engineers and my parent's encouragement to spend my time with activities that were mentally engaging. There are still a couple of boat motors that I took apart and did not put together floating around their home. Rather than videogames I was encouraged and supported into model aviation which was a fun outdoors activity that was also educational.

The only STEM outreach program I participated in was Science Olympiad which was a great learning experience that I pursued because I already had a love of science based on books, toys and conversations I had before joining that program. I think that holds true for most participants, I would expect that a very small portion of students that join Science

Olympiad discover a love of science, because most of them probably already have that interest, or they wouldn't join one of the least cool clubs in school. I would bet that's also true for other STEM programs like FIRST Robotics. I want to be clear that I don't mean to belittle those programs. I think they are important to keep young people interested in STEM and help them to learn and stay hooked through their school years, but I think there is an unfulfilled need for programs that market science and engineering to kids that don't have an existing interest.

I think something that could help generate interest in STEM for kids that don't have much initial exposure outside the standard K-12 education would be a program to link a child's life experience to engineering in easily comprehensible

ways. For example, a guest speaker that helps kids understand what different systems in a car do, how Xbox Kinect works or how bicycles are made could establish a link between engineering and what kids see as the “real world.” After building that connection the speaker could use their platform to plug programs like FIRST or Science Olympiad as great ways to learn real world skills that aren’t limited to flying rubber band powered airplanes or pushing beach balls around an arena.

Timothy Spath
Controls Engineer
Bendix Commercial Vehicle Systems LLC
Elyria OH

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

---

Original Message:
Sent: 09-11-2015 07:48
From: Jerry Alcone
Subject: The STEM crisis--your thoughts?

Agree, people that make good engineers are smart. Smart people chose jobs were they get paid a lot. If you don't understand you are not an engineer

---

Jerry Alcone

Retired
Albuquerque NM
---

top previous next

10 Re: Hot Rodders...engineers of all types!!

Reply to Group | Reply to Sender

Peter Gross

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

top previous next

11Re: Hot Rodders...engineers of all types!!

Reply to Group | Reply to Sender

-

Edward Forrest

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

top previous next

12 Re: Hot Rodders...engineers of all types!!

Reply to Group | Reply to Sender

-

Edward Forrest

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

13 Re: Hot Rodders...engineers of all types!!

Reply Reply

Sep 11, 2015 12:04 PM

Peter Vorum

Since at least 1989, GM, Ford, and Chrysler mini-van exhaust systems have had a hook sticking off of the frame; a rubber mount with 2 holes in it; and a hook sticking off of the muffler, converter, or tail pipe, to soft mount the exhaust system.

Peter Vorum
Fairborn OH

Reply to Group Online **View Thread** **Recommend** **Forward** **Flag as Inappropriate**

Original Message:
Sent: 09-10-2015 08:09
From: Edward Forrest
Subject: Hot Rodders...engineers of all types!!

Well...the IT-A AMC-Spirit-GT sits high on jack stands. The straight-pipe is on the wall and the stainless steel headers (circa 1995...thanks, Jeep) look business like. AMC was rather creative, I learned by "hunt and peck" through the local "PullaPart". The downpipe fits nicely under the frame of the 1981 car...that Walker claims fits the 1995 Jeep Cherokee!

Pipe is snug to the unibody...and...get this...hanging at the end of it is a l-o-v-e-l-y 31" Thrush glasspack.

OK...before I finish this...and remember this is mostly for the benefit of my wife and the neighbors...I need to be pointed in the right direction. (The only cars I ever built were "race cars" so some of these things just didn't matter!!)

1.) Know that the engine is on solid mounts and there is also a stabilizer bar to accomodate torque from the ++4.2 litre engine.

Having said that...in general...does an exhaust system "float" when it is mounted in a contemporary car? That is...with engine movement...does the exhaust system also move? Do I worry about the pipes being "too tight"...I guess at this point...why, huh?

(If I mount it too tightly against the floor board...but then...there is no
seat there anyway. Maybe blister paint. Is there a replacement...for
asbestos!!??)

2.) Weld the Thrush...or...clamp it with one of those $9.95 clamps and
gaskets? Being a chemical guy (also fiber optics) I am always intrigued
with some of the things that are on the market other than a welding rod!!

Thanks...can't wait to hear the Thrush!! Amazing they are still
available...and for $22.00...what a blast!

3.) I just might get a plate for this thing and take it for a ride...

ed

top previous next

14 Re: Hot Rodders...engineers of all types!!

Reply to Group | Reply to Sender

Jerry Alcone

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15 Re: Holley Hydramat, Fuel Pickup - Underlaying physics, theory?

Jerry Alcone

Thanks Pete for bringing this to everyone's attention. A neat idea. Re your question, I would assume the fluid viscosity would drive the dimension (diameter) of the "filter" media pores. My concern is that you really don't want it to be a filter unless it can be easily cleaned or is cheap to replace.

Jerry Alcone
Retired
Albuquerque NM

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Original Message:
Sent: 09-09-2015 11:51
From: Pete Garcia
Subject: Holley Hydramat, Fuel Pickup - Underlaying physics, theory?

Hello All,

I have been thinking about Holley's Hydramat design for a few weeks now and I'm hoping for some knowledgable commentary about how it works. I've heard of a surface tension fuel pickup for aircraft fuels but it looks like Holley has applied this design for automotive EFI fuel tanks.

Holley Debuts New HydraMat Fuel Reservoir

My question - is this type of filter pickup only for 'fuel' type liquids (very low viscosity). If viscosity is the only property hinging on the surface tension and wicking properties of the filter media, what is the limit? Is ULV ATF or gear oil a possibility?

Thanks!

Pete

Pete Garcia
Lead Engineer - Transmission
General Motors Co
North Branch MI

---

16 Re: A real design challenge

Reply to Group | Reply to Sender

-

Jerry Alcone

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

17 Re: A real design challenge

-

Rick Kerner

Clean Coal Technologies | Carbon Capture and Storage | CCS

Clean Coal Technologies | Carbon Capture and Storage | CCS

(Updated August 2015) Coal is a vital fuel in most parts of the world. Burning coal without adding to global carbon dioxide levels is a major technological challenge which is being addressed. The most promising 'clean coal' technology involves using the coal to make hydrogen from water, then burying the resultant carbon dioxide by-product and burning the hydrogen.

View this on World-nuclear >

Rick Kerner Principal Engineer
KTO Solutions LLC
Sunburg, MN
rick.kerner@ktosolutions.com

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top previous

18 Re: CA Senate Bill 350 will destroy the automotive industry

Reply to Group | Reply to Sender

Jerry Alcone

Dollar Democracy has spoken again.

Jerry Alcone
Retired
Albuquerque NM

Reply to Group Online View Thread Recommend Forward Flag as Inappropriate

---

Original Message:
Sent: 09-10-2015 08:00
From: Robert Gruszczynski
Subject: CA Senate Bill 350 will destroy the automotive industry

Mark Twain's "the report of my death was

an exaggeration. " comes to mind...

Remarks by Senate President pro Tempore Kevin de León at a Press Conference on SB 350

and if you want to cut to the chase:

"...agreed to amend SB 350 to remove the petroleum section and move forward with the other two sections..."

Robert Gruszczynski
OBD Communication Expert
Volkswagen of America
Willis MI

You are subscribed to "Open Forum" as pidgeon.bill@epa.gov. To change your subscriptions, go to My Subscriptions. To unsubscribe from this community discussion, go to Unsubscribe.

To: Ball, Joel[ball.joel@epa.gov]
From: Ex. 6
Sent: Sat 9/12/2015 10:18:46 PM
Subject: VW TDI motor swap

Good afternoon,
My name is Ex. 6 I'm currently living in the Charlotte, NC area. I am a diesel motor enthusiast and I have a project that I am planning, but I first want to make sure it's going to be something I'll be able to drive on the road when finished. My plan will be to swap a 3.0 v6 TDI clean diesel from a 2009-12 VW Touareg or Audi Q7 into a Nissan Frontier pickup truck.

I know the general EPA stance on this is that it is tampering with federal emissions and certification and it is generally frowned upon, however in the mobile source enforcement memorandum addendum 1A it also states that

"... EPA will not consider any modification to a "certified configuration" to be a violation of federal law if there is a reasonable basis for knowing that emissions are not adversely affected. In many cases, proper emission testing according to the Federal Test Procedure would be necessary to make this determination."

In the next paragraph is also states:

"For light-duty vehicles, installation of a light-duty engine into a different light-duty vehicle by any person would be considered tampering unless the resulting vehicle is identical (with regard to all emission related parts, engine design parameters, and engine calibrations) to a certified configuration of the same or newer model year as the vehicle chassis, ***or if there is a reasonable basis for knowing that emissions are not adversely affected as described in Memo 1A."***

Which is why I am contacting you today. What I'd like to do is to swap the VW/Audi clean diesel TDI motor into the pickup for a multitude of reasons, such as better fuel mileage in the truck, manual transmission, etc. My plan is to swap and retain the emissions equipment and set up that the motor came with and was certified with in all 50 states, but in speaking with the NC DMV and the NC board of air quality there was concern that I may need some further emissions testing as this will be a motor in a chassis that it hasn't been certified in, yet.

I know you have an emissions testing lab in Ann Arbor, and the gentleman I was speaking to in NC said there was possibly also a facility that could do the federal emissions and drive cycle testing in Athens, GA, I believe. I would like to complete this endeavor, but only if I know I'll be able to get it tested and likely certified to drive on-road when I'm finished. What would be involved in getting a custom project like this tested when it is finished? Would it need to do simple OBD hookup and emissions verification/visual inspection of no soot from the exhaust, check that the components are in place, would it need the formal drive cycle testing procedure, or is there another way to test what I am trying to do?

I am fairly confident the emissions will be at or below the original tested configurations as the pickup truck weighs almost 1500lbs less than the two SUVs it came from, and it will be a

switchable 4x4 vs the full time 4x4 4motion/quattro system in the SUVs. Plus, the truck comes with a larger 4.0L v6 that gets at most 20-21 mpg on the highway, and the smaller displacement 3.0L v6 TDI would be able to get at least the 27-28mpg of the VW/Audi SUVs, but likely more. I would like to use this motor as I am familiar with the VW diesels and have owned three since 2003 which have proved very reliable with the last one lasting until 350,000 miles. The Nissan Frontier is sold with a diesel motor overseas as the Navara, but as these motors are not sold or certified in the US, I cannot use these currently even though it would be a much simpler conversion task.

I know this is an odd request, but I'd like to get all of the information I can before we begin buying parts and motors as well as working on the conversion.

Let me know if you have any questions, I am also reachable by phone if need be. If there is someone else I would need to speak with, I would appreciate their contact information.

Thank you,

Ex. 6

--

Ex. 6

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Werner, Jacqueline
Sent: Sat 9/12/2015 10:52:51 PM
Subject: Como time for VW

Have you requested approval from Susan/Rosemarie of comp time for Meetu/Greg for any work they do during the weekend on the NOV for VW?

Thanks,
jj

Sent from my iPhone

Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Starfield, Lawrence[Starfield.Lawrence@epa.gov]
From: McCabe, Janet
Sent: Sun 9/13/2015 12:38:11 AM
Subject: Re: VW Diesel Timing Options v2.docx

The call in number for tomorrow is **Non-Responsive**

Sent from my iPhone

> On Sep 12, 2015, at 6:56 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>

Ex. 5, 7

>
> Talk to you all tomorrow
>
> Chris
>
> <VW Diesel Timing Options v2.docx>
>
>
>
>
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Belser, Evan[Belser.Evan@epa.gov]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]; Starfield, Lawrence[Starfield.Lawrence@epa.gov]
From: Giles-AA, Cynthia
Sent: Sun 9/13/2015 3:13:19 PM
Subject: FW: VW Diesel Timing Options v2.docx
VW Diesel Timing Options v2.docx
ATT00001.txt

Here's the discussion document. Call in info to follow.

-----Original Message-----
From: Grundler, Christopher
Sent: Saturday, September 12, 2015 6:56 PM
To: McCabe, Janet; Giles-AA, Cynthia
Cc: Bunker, Byron; Brooks, Phillip; Hengst, Benjamin; Cook, Leila; Garbow, Avi; Starfield, Lawrence
Subject: VW Diesel Timing Options v2.docx

Ex. 5, 7

Talk to you all tomorrow

Chris

To: Belser, Evan[Belser.Evan@epa.gov]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]; Starfield, Lawrence[Starfield.Lawrence@epa.gov]
From: Giles-AA, Cynthia
Sent: Sun 9/13/2015 3:13:49 PM
Subject: FW: VW Diesel Timing Options v2.docx

-----Original Message-----
From: McCabe, Janet
Sent: Saturday, September 12, 2015 8:38 PM
To: Grundler, Christopher
Cc: Giles-AA, Cynthia; Bunker, Byron; Brooks, Phillip; Hengst, Benjamin; Cook, Leila; Garbow, Avi; Starfield, Lawrence
Subject: Re: VW Diesel Timing Options v2.docx

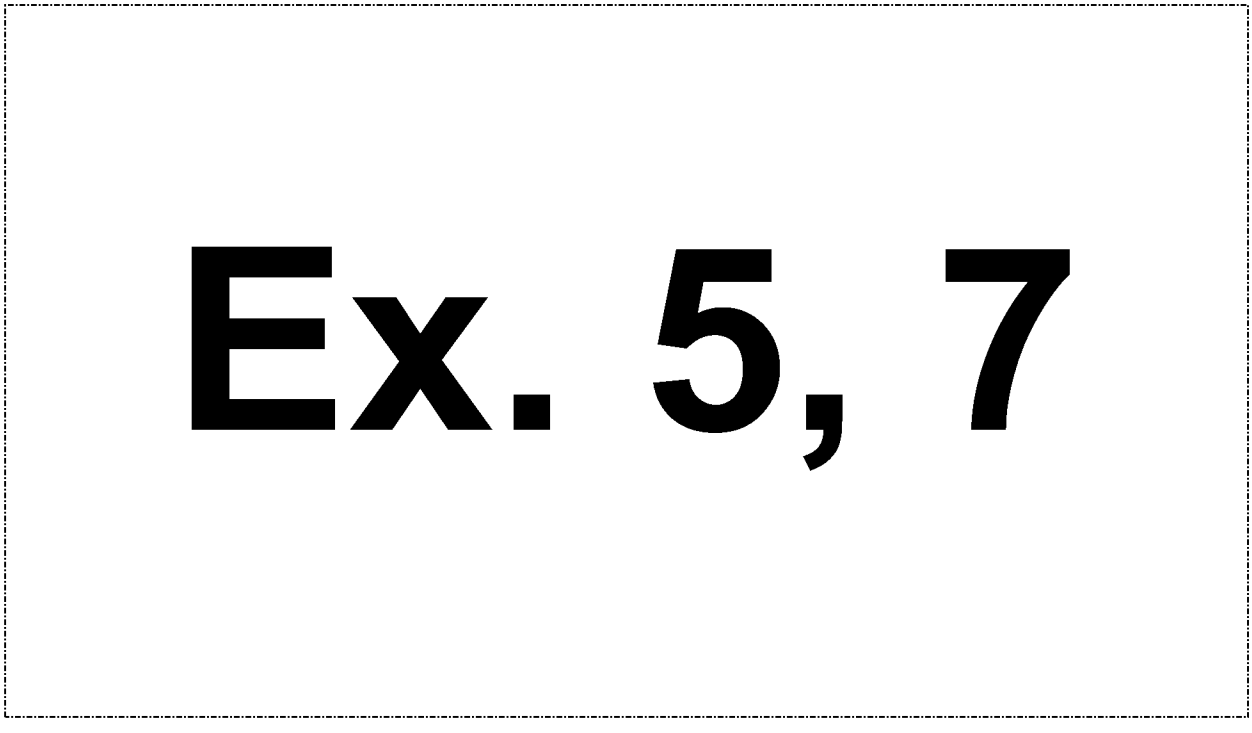
The call in number for tomorrow is **Non-Responsive**

Sent from my iPhone

To: Belser, Evan[Belser.Evan@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]; Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]
From: Brooks, Phillip
Sent: Sun 9/13/2015 8:25:23 PM
Subject: RE: Call

I am back on line (I hope). At office now, but the problem was expired system password, so that should fix the phone access to email. Great time to lose it!

From: Belser, Evan
Sent: Sunday, September 13, 2015 2:20 PM
To: Shinkman, Susan; Brooks, Phillip; Kelley, Rosemarie
Subject: Re: Call



Evan

From: Shinkman, Susan
Sent: Sunday, September 13, 2015 2:10 PM

To: Brooks, Phillip; Belser, Evan; Kelley, Rosemarie
Subject: Call

I was on the call. Is Thursday doable?

Ex. 5, 7

From: Brooks, Phillip
Location: Non-Responsive
Importance: Normal
Subject: Accepted: HOLD for EPA-ARB Civil Team Coordination on VW matter
Start Date/Time: Fri 9/18/2015 7:00:00 PM
End Date/Time: Fri 9/18/2015 8:00:00 PM

To: Ex. 7
From: Grundler, Christopher
Sent: Mon 9/14/2015 1:52:44 AM
Subject: VW

Ex. 7

Checking in. Our people are working in close coordination on this matter. We should compare notes sometime tomorrow. I will be traveling to DC in the morning getting in around 9 am your time.

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Ex. 7
Sent: Mon 9/14/2015 2:29:21 AM
Subject: Re: VW

Thanks Chris. I had a few exchanges with Ex. 7 oday and was indeed interested in touching bases with you. Will plan to call tomorrow after 9:00 am PST.

Ex. 7

Sent from my iPhone

> On Sep 13, 2015, at 6:52 PM, "Grundler, Christopher" <grundler.christopher@epa.gov> wrote:
>
> Ex. 7
> Checking in. Our people are working in close coordination on this matter. We should compare notes sometime tomorrow. I will be traveling to DC in the morning getting in around 9 am your time.
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: SAE Member Connection
Sent: Mon 9/14/2015 9:41:45 AM
Subject: Open Forum Digest for Sunday September 13, 2015

[redacted]

Open Forum

Post New Message

Sep 13, 2015

started 3 days ago, Lindsay Silver (17 replies)

The STEM crisis--your thoughts?

1I agree with the comment "check out the... James Breneman

started 9 days ago, Barry Duffin (7 replies)

CA Senate Bill 350 will destroy the automotive industry

2If you did or did not like the last, then you... Robert Gruszczynski

started 15 days ago, Richard Gilbert (21 replies)

Why Old People Drive into Shops -

3Richard, I find your suggestion of...
Richard Dafforn

top next

1. Re: The STEM crisis--your thoughts?

Reply to Group | Reply to Sender

-

James Breneman

'

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2. Re: CA Senate Bill 350 will destroy the automotive industry

Reply to Group | Reply to Sender

-

Robert Gruszczynski

http://www.sacbee.com/news/politics-

government/capitol-alert/article34802526.html

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---

Original Message:
Sent: 09-10-2015 08:00
From: Robert Gruszczynski
Subject: CA Senate Bill 350 will destroy the automotive industry

Mark Twain's "the report of my death was an exaggeration. " comes to mind...

Remarks by Senate President pro Tempore Kevin de León at a Press Conference on SB 350

and if you want to cut to the chase:

"...agreed to amend SB 350 to remove the petroleum section and move forward with the other two sections..."

Robert Gruszczynski
OBD Communication Expert
Volkswagen of America
Willis MI

---

3. Re: Why Old People Drive into Shops

-

Richard Dafforn

'

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Recommend Forward Flag as Inappropriate

My Subscriptions. To unsubscribe from this community discussion, go to Unsubscribe.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Bunker, Byron
Sent: Mon 9/14/2015 10:46:00 AM
Subject: Re: VW

Sorry, I lost this email in my inbox.

I did talk to Ex. 7 All good on their end. I am pretty sure that she talked to Ex. 7 as well.

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Cell Phone (734) 353-9623

Sent from my cell phone.

On Sep 13, 2015, at 10:30 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

> Fyi. Did u connect with Ex. 7 after our call today?
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)
>
> Begin forwarded message:
>
> **From:** Ex. 7
> **Date:** September 13, 2015 at 10:29:21 PM EDT
> **To:** "Grundler, Christopher" <grundler.christopher@epa.gov>
> **Subject: Re: VW**
>
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>
> Ex. 7
>
> Sent from my iPhone
>
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Ex. 7

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Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

From: Sutton, Tia
Required Attendees: Hengst, Benjamin; Bunker, Byron; Lewis, Josh; Haman, Patricia; Millett, John; Wehrly, Linc; Werner, Jacqueline; Belser, Evan; Brooks, Phillip; Birgfeld, Erin; Distefano, Nichole
Optional Attendees: Thomas Reynolds (Reynolds.Thomas@epa.gov); Allen, Laura; Julia Valentine (Valentine.Julia@epa.gov); StClair, Christie; Conger, Nick; Hull, George; Orlin, David; Kataoka, Mark; Senn, John; Levine, Carolyn; Janifer, Pamela
Location: DCRoomARN6524/DC-OAR-OTAQ-IO + call-in
Importance: Normal
Subject: Heads-up briefing on OTAQ/OECA vehicle issue - briefing materials attached
Start Date/Time: Mon 9/14/2015 6:00:00 PM
End Date/Time: Mon 9/14/2015 7:00:00 PM
VW Diesel Summary - Timeline Only 9-14-2015.docx
VW Diesel Background 9-14-2015.pptx

Please see attached for briefing materials. We will have copies here in the room as well.

Hi everyone,
Sorry for the short notice, but we've recently had an issue brewing with a major non-US auto-manufacturer (with plants in the US), and it looks as though as early as Thursday we could be going public with a significant OECA notice of violation related to many vehicles exceeding emissions standards.

We would like to brief everyone to get you up to speed on the issue and so you'll have all of the info necessary for the upcoming announcement.

In DC, we'll meet in room WJC North Rm 6524. For those calling in: (866) 299-3188, conf code- **Ex. 6**

From: Sutton, Tia
Required Attendees: Hengst, Benjamin; Bunker, Byron; Lewis, Josh; Haman, Patricia; Millett, John; Wehrly, Linc; Werner, Jacqueline; Belser, Evan; Brooks, Phillip; Birgfeld, Erin; Distefano, Nichole
Optional Attendees: Thomas Reynolds (Reynolds.Thomas@epa.gov); Allen, Laura; Julia Valentine (Valentine.Julia@epa.gov); StClair, Christie; Conger, Nick; Hull, George; Orlin, David; Kataoka, Mark; Senn, John; Levine, Carolyn; Janifer, Pamela
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In DC, we'll meet in room WJC North Rm 6524. For those calling in: (866) 299-3188, conf code- **Non-Responsive**

From: Kaul, Meetu
Required Attendees: Orehowsky, Gregory
Location: 6524 North building
Importance: Normal
Subject: VW Press meeting
Start Date/Time: Mon 9/14/2015 6:00:00 PM
End Date/Time: Mon 9/14/2015 7:00:00 PM

From: Kaul, Meetu
Required Attendees: Orehowsky, Gregory
Location: 6524 North building
Importance: Normal
Subject: VW Press meeting
Start Date/Time: Mon 9/14/2015 6:00:00 PM
End Date/Time: Mon 9/14/2015 7:00:00 PM

To: Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Belser, Evan
Sent: Mon 9/14/2015 2:02:25 PM
Subject: RE: Monday am

I haven't seen anything either.

From: Kelley, Rosemarie
Sent: Monday, September 14, 2015 9:57 AM
To: Brooks, Phillip; Belser, Evan
Subject: FW: Monday am

Did Linda schedule this meeting yet? I have not seen a scheduler for it. I just spoke with Susan and she'd like to participate too.

Rosemarie

From: Giles-AA, Cynthia
Sent: Sunday, September 13, 2015 2:46 PM
To: Huffman, Linda
Cc: Starfield, Lawrence; Kelley, Rosemarie; Brooks, Phillip; Belser, Evan
Subject: Monday am

Linda – can you find us 30 minutes Monday am to discuss VW? Thanks.

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Mon 9/14/2015 2:04:52 PM
Subject: PHEV supplemental data

Hi Jim,

I submitted the supplemental data as discussed. Thanks for the help.

Regards,

Bill Rodgers

Volkswagen Group

From: Orehowsky, Gregory
Location: 6524 North building
Importance: Normal
Subject: Accepted: VW Press meeting
Start Date/Time: Mon 9/14/2015 6:00:00 PM
End Date/Time: Mon 9/14/2015 7:00:00 PM

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Mon 9/14/2015 2:15:13 PM
Subject: Supplemental data

I spoke too soon.

It looks like I cannot include Ex. 4 - CBI

Bill

Transaction Status Details

Transaction Status Identifier : REJECTED
Transaction Message Text : Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

EEO

From: Bunker, Byron
Required Attendees: Bunker, Byron; Belser, Evan; Brooks, Phillip; Kaul, Meetu; Werner, Jacqueline; Wehrly, Linc; Manners, Mary; Hengst, Benjamin; Sutton, Tia
Optional Attendees: Cohen, Janet
Location: WJCN 6520S video to N120
Importance: Normal
Subject: VW Next Steps
Start Date/Time: Mon 9/14/2015 8:00:00 PM
End Date/Time: Mon 9/14/2015 9:00:00 PM

From: Bunker, Byron
Required Attendees: Belser, Evan; Brooks, Phillip; Kaul, Meetu; Werner, Jacqueline; Wehrly, Linc; Manners, Mary; Hengst, Benjamin; Sutton, Tia
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Location: WJCN 6520S video to N120
Importance: Normal
Subject: Ex. 5
Start Date/Time: Mon 9/14/2015 8:00:00 PM
End Date/Time: Mon 9/14/2015 9:00:00 PM

From: Bunker, Byron
Required Attendees: Belser, Evan; Brooks, Phillip; Kaul, Meetu; Werner, Jacqueline; Wehrly, Linc; Manners, Mary; Hengst, Benjamin; Sutton, Tia
Location: WJCN 6520S video to N120
Importance: Normal
Subject: VW Next Steps
Start Date/Time: Mon 9/14/2015 8:00:00 PM
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From: Kaul, Meetu
Location: WJCN 6520S video to N120
Importance: Normal
Subject: Accepted: VW Next Steps
Start Date/Time: Mon 9/14/2015 8:00:00 PM
End Date/Time: Mon 9/14/2015 9:00:00 PM

To: Belser, Evan[Belser.Evan@epa.gov]
Cc: Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]
From: Brooks, Phillip
Sent: Mon 9/14/2015 2:26:23 PM
Subject: Re: Monday am

Nothing.

Sent from my iPhone

On Sep 14, 2015, at 10:02 AM, Belser, Evan <Belser.Evan@epa.gov> wrote:

I haven't seen anything either.

From: Kelley, Rosemarie
Sent: Monday, September 14, 2015 9:57 AM
To: Brooks, Phillip; Belser, Evan
Subject: FW: Monday am

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To: Huffman, Linda
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Subject: Monday am

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Importance: Normal
Subject: Accepted: VW Next Steps
Start Date/Time: Mon 9/14/2015 8:00:00 PM
End Date/Time: Mon 9/14/2015 9:00:00 PM

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Orehowsky, Gregory
Sent: Mon 9/14/2015 2:41:36 PM
Subject: RE: VW Diesel Test Groups and sales volumes

Thanks, Jim.

Ex. 5, 7

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

From: Snyder, Jim
Sent: Monday, September 14, 2015 8:59 AM
To: Orehowsky, Gregory
Subject: RE: VW Diesel Test Groups and sales volumes

Just got a call back from VWA and he immediately confirmed what I highlighted in yellow.

From: Snyder, Jim
Sent: Friday, September 11, 2015 4:59 PM
To: Orehowsky, Gregory
Subject: RE: VW Diesel Test Groups and sales volumes

Greg, **Ex. 5, 7**

Ex. 5, 7

From: Orehowsky, Gregory
Sent: Friday, September 11, 2015 2:55 PM
To: Snyder, Jim
Subject: RE: VW Diesel Test Groups and sales volumes

Jim:

Ex. 5, 7

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

From: Snyder, Jim
Sent: Friday, September 11, 2015 10:55 AM
To: Orehowsky, Gregory
Cc: Kaul, Meetu
Subject: RE: VW Diesel Test Groups and sales volumes

We can do that. I have a mtg to 2:30. 3 is okay if I don't get more urgent assignments today.

From: Orehowsky, Gregory
Sent: Friday, September 11, 2015 10:51 AM
To: Snyder, Jim
Cc: Kaul, Meetu
Subject: RE: VW Diesel Test Groups and sales volumes

Jim:

Thanks for the sales information

Ex. 5, 7

Can we give you a call this afternoon or is there some other time which works?

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

From: Snyder, Jim
Sent: Friday, September 11, 2015 10:39 AM
To: Orehowsky, Gregory; Bunker, Byron; Wehrly, Linc; Wright, DavidA; Ball, Joel
Subject: VW Diesel Test Groups and sales volumes

Ex. 5, 7

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Hopson, Janet L.[hopsonjl@ornl.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Good, David
Sent: Mon 9/14/2015 3:38:10 PM
Subject: RE: Fuel Economy Guide Website - 2016 Model Types - Questions about the website

Richard,

DOE hasn't begun using the 2016 average mpg, electricity costs, etc. yet----because all previous model year vehicles are compared to this value, etc. They will change over to the 2016 fuel costs, etc in the late fall or early in 2016 calendar year.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, September 10, 2015 7:42 AM
To: Good, David
Cc: Hopson, Janet L.; Kata, Leonard (EEO)
Subject: Fuel Economy Guide Website - 2016 Model Types

Hi Dave;

I know you are on vacation this week but thought I would send this out before I forget. I was

Ex. 4 - CBI

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Hopson, Janet L.[hopsonjl@ornl.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 9/14/2015 3:41:32 PM
Subject: RE: Fuel Economy Guide Website - 2016 Model Types - Questions about the website

Thank you Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, September 14, 2015 11:38 AM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Cc: Hopson, Janet L. <hopsonjl@ornl.gov>; Kata, Leonard (EEO) <Leonard.Kata@vw.com>
Subject: RE: Fuel Economy Guide Website - 2016 Model Types - Questions about the website

Richard,

DOE hasn't begun using the 2016 average mpg, electricity costs, etc. yet----because all previous model year vehicles are compared to this value, etc. They will change over to the 2016 fuel costs, etc in the late fall or early in 2016 calendar year.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, September 10, 2015 7:42 AM
To: Good, David
Cc: Hopson, Janet L.; Kata, Leonard (EEO)
Subject: Fuel Economy Guide Website - 2016 Model Types

Hi Dave;

I know you are on vacation this week but thought I would send this out before I forget. I was examining the fuel economy guide website when I noticed that the **2016** Volkswagen model year

vehicles still list the text in the "You save or spend*" section that reads: "Note: The average 2015 vehicle gets 24 MPG". For 2016 model year vehicles this should now be 25 MPG.

I have copied Janet with this mail and perhaps she may change that so the 2016 average will read 25 MPG on the website for the 2016 model year products. It was also the same for other manufacturers' 2016 models.

I also noticed that the 2016 Volkswagen e-Golf when selected reads $0.88 to drive 25 miles, the same as the last model year's model. This was based upon the $0.12 per kW-hr of electricity. The official value for electricity is now $0.13 per kW-hr. That would of course, affect the value that is shown in the "Cost to drive 25 miles". Shouldn't the unit price first be shown with the official model year label 2016 unit prices (regular gasoline $3.00, premium gasoline $3.30, Diesel $3.35, electric $0.13) of fuel and then the customer could personalize the unit price to get an updated savings, spending or cost to drive 25 miles value?

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 9/14/2015 3:59:12 PM
Subject: 2016 Audi S8

Ex. 4 - CBI

Hi Dave;

I guess you are in the office today (Monday). As a reminder, I have attached an email I wrote to you before your vacation week. Ex. 4 - CBI

Ex. 4 - CBI

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 9/14/2015 3:59:12 PM
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Ex. 4 - CBI

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Richard

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Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 1:52:34 PM
Subject: Running Change Fuel Economy 2016 Audi S8

Hi Dave;

A reminder to look into this issue when you have time on Thursday, maybe. First allow me to

Ex. 4 - CBI

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 1:52:34 PM
Subject: Ex. 4 - CBI Audi S8

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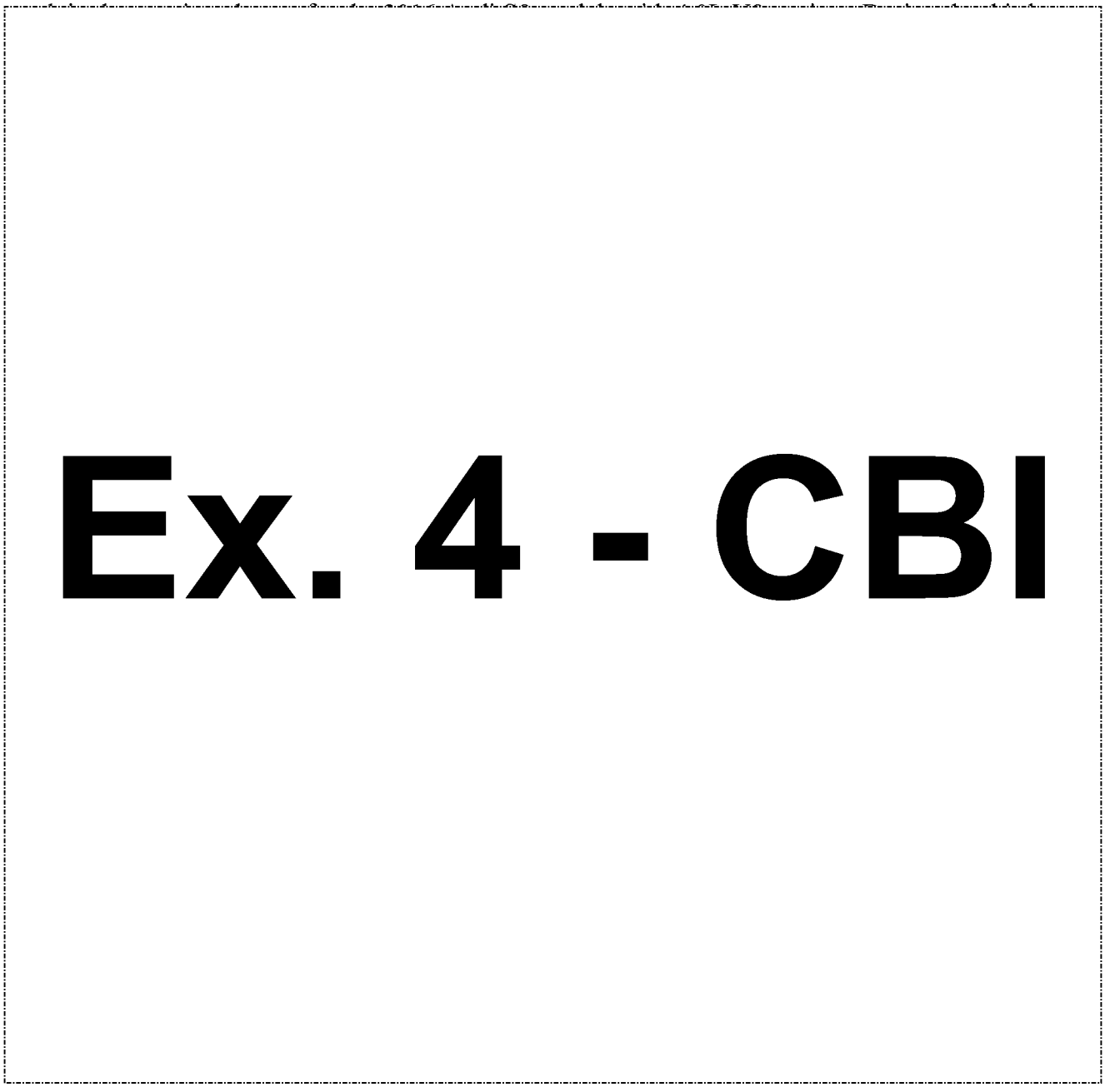
A reminder to look into this issue when you have time on Thursday, maybe. First allow me to



Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

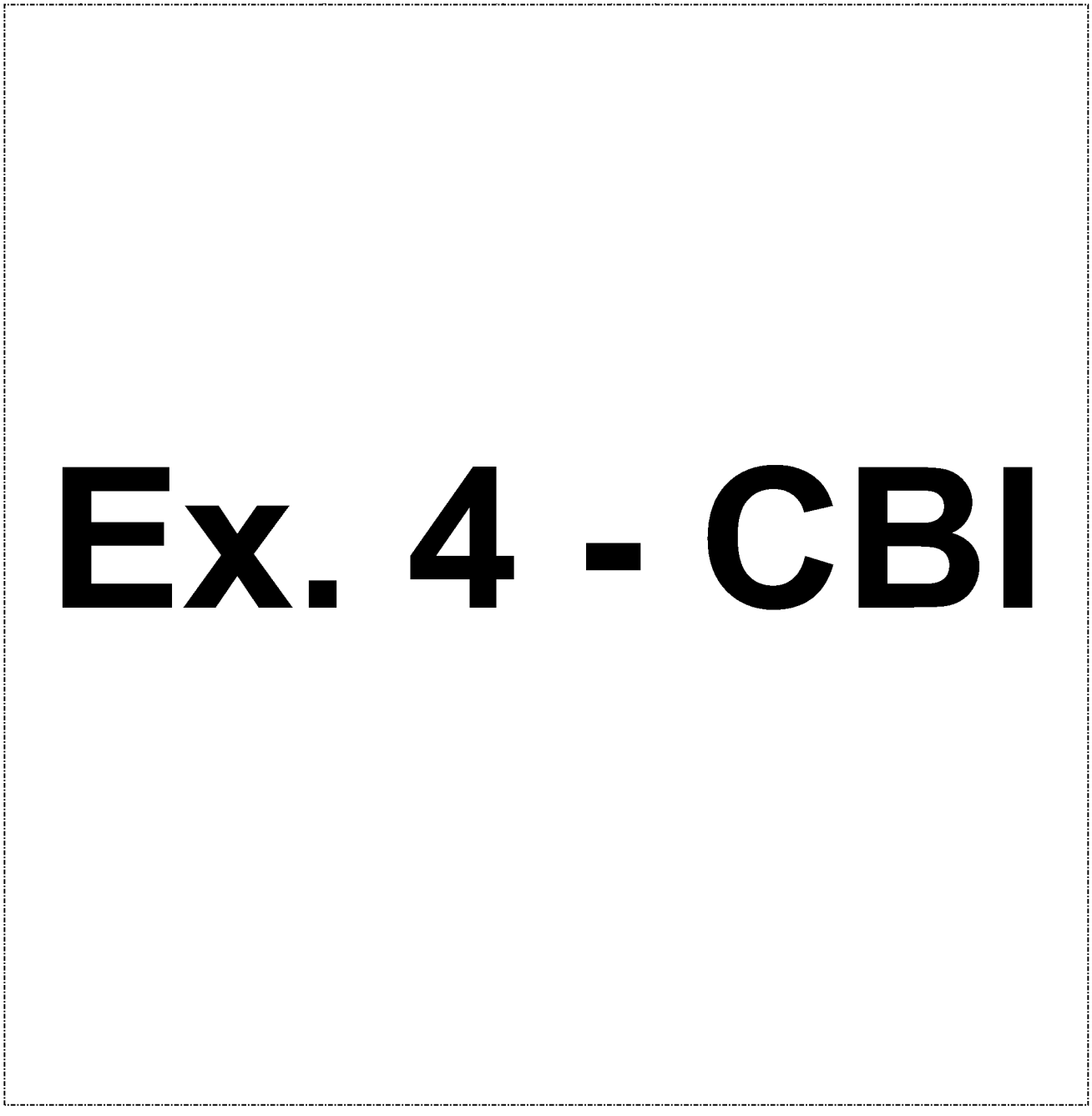
Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 1:52:34 PM
Subject: Running Change Fuel Economy 2016 Audi S8

Hi Dave;

A reminder to look into this issue when you have time on Thursday, maybe. First allow me to



Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Bunker, Byron[bunker.byron@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Cohen, Janet[cohen.janet@epa.gov]
From: Belser, Evan
Sent: Mon 9/14/2015 5:27:18 PM
Subject: Re: right way to refer to VW

Meetu, can you reply all with the list of the corporate entities on the NOV?

By the way, Meetu is sharing a draft of that NOV momentarily. Thank you for your comments.

Ex. 5

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 14, 2015, at 1:19 PM, Bunker, Byron <bunker.byron@epa.gov> wrote:

> Hi Evan,
>
> How do we refer to the VW Group in the Americas and VW Germany? I want to make sure we are using consistent language.
>
> Thanks,
>
> Byron
>
> **********
>
> Byron Bunker
>
> Director Compliance Division
>
> Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Sutton, Tia
Required Attendees: Hengst, Benjamin; Bunker, Byron; Lewis, Josh; Haman, Patricia; Millett, John; Wehrly, Linc; Werner, Jacqueline; Belser, Evan; Brooks, Phillip; Birgfeld, Erin; Distefano, Nichole
Optional Attendees: Thomas Reynolds (Reynolds.Thomas@epa.gov); Allen, Laura; Julia Valentine (Valentine.Julia@epa.gov); StClair, Christie; Conger, Nick; Hull, George; Orlin, David; Kataoka, Mark; Senn, John; Levine, Carolyn; Janifer, Pamela
Location: DCRoomARN6524/DC-OAR-OTAQ-IO + call-in
Importance: Normal
Subject: Heads-up briefing on OTAQ/OECA vehicle issue - briefing materials attached
Start Date/Time: Mon 9/14/2015 6:00:00 PM
End Date/Time: Mon 9/14/2015 7:00:00 PM
VW Diesel Summary - Timeline Only 9-14-2015.docx
VW Diesel Background 9-14-2015.pptx

Please see attached for briefing materials. We will have copies here in the room as well.

Hi everyone,
Sorry for the short notice, but we've recently had an issue brewing with a major non-US auto-manufacturer (with plants in the US), and it looks as though as early as Thursday we could be going public with a significant OECA notice of violation related to many vehicles exceeding emissions standards.

We would like to brief everyone to get you up to speed on the issue and so you'll have all of the info necessary for the upcoming announcement.

In DC, we'll meet in room WJC North Rm 6524. For those calling in: (866) 299-3188, conf code-
Non-Responsive

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 9/14/2015 6:38:59 PM
Subject: Porsche and Audi unveil electric cars to take on Tesla
MAIL_CONVERSATION_TOPIC: Porsche and Audi unveil electric cars to take on Tesla
Created: Fri 3/18/2016 6:18:25 PM

The high-performance electric car market is shaping up to be a high-profile battleground featuring some of the world's most glamorous brands after Porsche and Audi unveiled models to challenge U.S. pioneer Tesla Motors (TSLA.O).

View article...

To: Snyder, Jim[Snyder.Jim@epa.gov]; verifyhelp@csc.com[verifyhelp@csc.com]
From: Rodgers, William (EEO)
Sent: Mon 9/14/2015 7:13:57 PM
Subject: RE: VW processing error

Correct Jim.

I get the Processing Error attached.

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, September 14, 2015 3:12 PM
To: Rodgers, William (EEO); verifyhelp@csc.com
Subject: RE: VW processing error

And from what you said, Ex. 4 - CBI resulted in an immediate rejection, correct?

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, September 14, 2015 3:09 PM
To: verifyhelp@csc.com
Cc: Snyder, Jim
Subject: VW processing error

Vince, We tried to submit Ex. 4 - CBI but still get the processing error attached.

Ex. 4 - CBI instead it will process but returns this rejection:

Transaction Status Details

Transaction Status Identifier : REJECTED

Ex. 4 - CBI

Ex. 4 - CBI

Please let me know a next step so we can get this SI submitted.

Bill Rodgers

Volkswagen Group

248-754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/14/2015 2:57:50 PM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Mon Sep 14 14:57:18 EDT 2015 while processing document:

Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

EEO

To: Danzeisen, Karen[Danzeisen.Karen@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Mon 9/14/2015 7:38:13 PM
Subject: RE: VW Ex. 4 - CBI

Ex. 4 - CBI
Ex. 4 - CBI is that correct Bill?

From: Danzeisen, Karen
Sent: Monday, September 14, 2015 3:33 PM
To: Snyder, Jim
Subject: RE: VW Ex. 4 - CBI

If the error snippet shown below is what they most recently submitted, then it seems like they are

Ex. 4 - CBI

Ex. 4 - CBI

Thanks,

Karen

From: Snyder, Jim
Sent: Monday, September 14, 2015 3:24 PM
To: Danzeisen, Karen
Subject: FW: VW Ex. 4 - CBI

Looks like it didn't work.

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, September 14, 2015 3:14 PM
To: Snyder, Jim; verifyhelp@csc.com
Subject: RE: VW Ex. 4 - CBI

Correct Jim.

Ex. 4 - CBI

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, September 14, 2015 3:12 PM
To: Rodgers, William (EEO); verifyhelp@csc.com
Subject: RE: VW processing error

Ex. 4 - CBI

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To: verifyhelp@csc.com
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Subject: VW Ex. 4 - CBI

Ex. 4 - CBI

Transaction Status Details

Ex. 4 - CBI

Bill Rodgers

Volkswagen Group

248-754-4219

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Verify Administrator

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The rejection occurred at Mon Sep 14 14:57:18 EDT 2015 while processing document:

Ex. 4 - CBI

Vehicle ID: **Ex. 4 - CBI**

Vehicle Configuration #: 0

Transaction Identifier: Ex. 4 - CBI

Regards,

Bill Rodgers

EEO

To: Janet Cohen[Cohen.Janet@epa.gov]
From: Wehrly, Linc
Sent: Mon 9/14/2015 7:40:12 PM
Subject: Draft Roll Out Plan
VW Defeat Device_Rollout.docx

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Bunker, Byron
Required Attendees: Bunker, Byron; Ex. 7 @ARB; Ex. 7 @ARB; Ex. 7 @arb.ca.gov; Ex. 7 @ARB; Hengst, Benjamin; Sutton, Tia; Brooks, Phillip; Belser, Evan; Werner, Jacqueline; Wehrly, Linc; Cohen, Janet; Cook, Leila; Kaul, Meetu
Optional Attendees: Ex. 7 @ARB; Ex. 7 @ARB
Location: WJCN 6520S Ex. 6
Importance: Normal
Subject: VW Coordination
Start Date/Time: Mon 9/14/2015 9:00:00 PM
End Date/Time: Mon 9/14/2015 10:00:00 PM

From: Bunker, Byron
Required Attendees: Ex. 7 @ARB; Ex. 7 @ARB; Ex. 7 @arb.ca.gov; Ex. 7 @ARB; Hengst, Benjamin; Sutton, Tia; Brooks, Phillip; Belser, Evan; Werner, Jacqueline; Wehrly, Linc; Cohen, Janet; Cook, Leila; Kaul, Meetu
Location: WJCN Ex. 6
Importance: Normal
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Start Date/Time: Mon 9/14/2015 9:00:00 PM
End Date/Time: Mon 9/14/2015 10:00:00 PM

From: Bunker, Byron
Required Attendees: Ex. 7 Ex. 7 ; Hengst, Benjamin; Sutton, Tia; Brooks, Phillip; Belser, Evan; Werner, Jacqueline; Wehrly, Linc; Cohen, Janet; Cook, Leila; Kaul, Meetu
Location: WJCN 6520S - Conf Call 866 299-3188 Code Non-Responsive
Importance: Normal
Subject: VW Coordination
Start Date/Time: Mon 9/14/2015 9:00:00 PM
End Date/Time: Mon 9/14/2015 10:00:00 PM

From: Bunker, Byron
Required Attendees: Ex. 7 @ARB; Ex. 7 @ARB; Ex. 7 @arb.ca.gov; Ex. 7 @ARB; Hengst, Benjamin; Sutton, Tia; Brooks, Phillip; Belser, Evan; Werner, Jacqueline; Wehrly, Linc; Cohen, Janet; Cook, Leila; Kaul, Meetu
Location: Ex. 6
Importance: Normal
Subject: VW Coordination
Start Date/Time: Mon 9/14/2015 9:00:00 PM
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From: Bunker, Byron
Required Attendees: Ex. 7 @ARB; Ex. 7 @ARB; Ex. 7 @arb.ca.gov; Ex. 7 @ARB; Hengst, Benjamin; Sutton, Tia; Brooks, Phillip; Belser, Evan; Werner, Jacqueline; Wehrly, Linc; Cohen, Janet; Cook, Leila; Kaul, Meetu
Location: WJCN 6520S - Conf Call Ex. 6
Importance: Normal
Subject: VW Coordination
Start Date/Time: Mon 9/14/2015 9:00:00 PM
End Date/Time: Mon 9/14/2015 10:00:00 PM

From: Bunker, Byron
Required Attendees: Ex. 7 @ARB; Ex. 7 @ARB; Ex. 7 @arb.ca.gov; Ex. 7 @ARB; Hengst, Benjamin; Sutton, Tia; Brooks, Phillip; Belser, Evan; Werner, Jacqueline; Wehrly, Linc; Cohen, Janet; Cook, Leila; Kaul, Meetu
Location: WJCN Ex. 6
Importance: Normal
Subject: VW Coordination
Start Date/Time: Mon 9/14/2015 9:00:00 PM
End Date/Time: Mon 9/14/2015 10:00:00 PM

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 9/14/2015 7:58:52 PM
Subject: P.M. NEWSCAST: Where Marchionne, UAW agree | At Frankfurt: Reveals from VW, Infiniti; Jaguar shows 1st crossover | Taking aim at Google | Subaru reaches higher

September 14, 2015

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1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 9/14/2015 7:59:11 PM
Subject: P.M. NEWSCAST: Where Marchionne, UAW agree | At Frankfurt: Reveals from VW, Infiniti; Jaguar shows 1st crossover | Taking aim at Google | Subaru reaches higher

September 14, 2015

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Automotive News
1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

From: Ex. 7 @ARB
Location: WJCN 6520S - Conf Call 866 299-3188 Code 7342144155#
Importance: Normal
Subject: Accepted: VW Coordination
Start Date/Time: Mon 9/14/2015 9:00:00 PM
End Date/Time: Mon 9/14/2015 10:00:00 PM

;

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 9/14/2015 8:09:36 PM
Subject: 2017 Volkswagen Tiguan First Look Review
MAIL_CONVERSATION_TOPIC: 2017 Volkswagen Tiguan First Look Review
Created: Fri 3/18/2016 6:18:24 PM

Debuting at the 2015 Frankfurt Motor Show in European-spec form, the 2017 Volkswagen Tiguan could be headed for a serious sales boost.

View article...

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 9/14/2015 8:30:57 PM
Subject: DAILY: Marchionne joins UAW talks | In Krafcik, Google gains a visionary | Barra says GM investors shrugged off talk of FCA merger | Infiniti will sell taller Q30 | F-150 to get more Alcoa aluminum

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September 14, 2015

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Marchionne will miss Frankfurt show to handle UAW talks

Fiat Chrysler Automobiles CEO Sergio Marchionne has cancelled his appearance at the Frankfurt auto show this week after the automaker was picked as the target company in labor talks in the U.S.

BLOG: **GABE NELSON**

In Krafcik, Google gains a visionary

Anyone who has spent any time with John Krafcik knows he isn't a typical auto executive. In a business where it's easy to get fixated on the next month of sales, the next quarter of earnings and the next model year, Krafcik takes the long view.

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Pontiac Aztek gains traction with millennials from 'Breaking

2015 FRANKFURT AUTO SHOW

Barra says target customers have rugged off-road looks

Infiniti will sell tall Q30 to tempt SUV/crossover buyers

General Motors CEO Mary Barra said the automaker's customers have the ability to "separate the wheat from the chaff" as she defended the company's decision to end production of the Chevrolet Cruze and Buick Verano compact cars last month.

Infiniti will add a version of its Q30 hatchback with a raised height in a bid to tempt some of the increasing numbers of buyers choosing cars with SUV styling. Dubbed the QX30 Concept, it will be revealed at the Frankfurt motor show in September in two variants, called the SE and Premium, the models are nearly an inch taller than the Sport version.

Bad'role Products pack some power in UAW talks

Caddy gives Newfract Suites a look of XT5 crossover -- from the air

Honda's redesigned 2016 Civic breaks cover

Google hires TrueCar's Krafcik to steer auto project

BLOG: DAVID BARKHOLZ

Marchionne makes habit of line-jumping into UAW talks

BLOG: LARRY P. VELLEQUETTE

Why did the UAW pick Fiat Chrysler?

UAW names Fiat Chrysler lead target in contract talks

Jaguar, joining key segment, prices F-Pace crossover from $43,385

2015 FRANKFURT AUTO SHOW

VW retools Tiguan with larger, lighter footprint

VW banks on redesigned Tiguan to shift focus from leadership to product

BLOG: **DAVE GUILFORD**

Marchionne's numbers take the shine off auto show glitz

Lamborghini's 2016 Huracan Spyder will start at $262,350

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Subaru sees 700,000 U.S. sales as early as 2017

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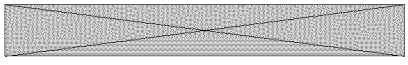


EVENTS

» Sept. 22 - NY Marketing Seminar

» Oct. 1 - Automobilwoche Kongress

» Oct. 14 - Best Dealerships To Work For

» Jan. 12 - Automotive News World Congress

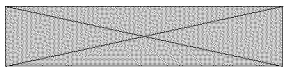
WEBINARS

» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive

» Oct. 7 at 2pm ET - Programmatic
by Rocket Fuel



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Automotive News
1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 9/14/2015 8:31:28 PM
Subject: DAILY: Marchionne joins UAW talks | In Krafcik, Google gains a visionary | Barra says GM investors shrugged off talk of FCA merger | Infiniti will sell taller Q30 | F-150 to get more Alcoa aluminum

Today's most read story

Google hires TrueCar's Krafcik to steer auto project

September 14, 2015

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Marchionne will miss Frankfurt show to handle UAW talks

Fiat Chrysler Automobiles CEO Sergio Marchionne has cancelled his appearance at the Frankfurt auto show this week after the automaker was picked as the target company in labor talks in the U.S.

BLOG: **GABE NELSON**

In Krafcik, Google gains a visionary

Anyone who has spent any time with John Krafcik knows he isn't a typical auto executive. In a business where it's easy to get fixated on the next month of sales, the next quarter of earnings and the next model year, Krafcik takes the long view.

MOST READ (Last 7 days)

Toyota boosts mpg, interior space on retooled 2016 Prius
Pontiac Aztek gains traction with millennials from 'Breaking

2015 FRANKFURT AUTO SHOW

Barra says target Volts buyers have high household incomes

Infiniti will sell tall Q30 to tempt SUV/crossover buyers

General Motors CEO Mary Barra said the automaker's investors have the right to be skeptical of its ability to earn a profit on the Chevrolet Volt, but added that the company is committed to the extended-range electric car.

Infiniti will add a version of its Q30 hatchback with a raised height in a bid to tempt some of the increasing numbers of buyers choosing cars with SUV styling. Dubbed the QX30 crossover concept, the model will be revealed at the Frankfurt motor show in two variants, called the SE and Premium, the models are nearly an inch taller than the Sport version.

Bad'role Products pack some power in UAW talks

Caddy gives contract deadline of XT5 crossover -- from the air

Honda's redesigned 2016 Civic breaks cover

Google hires TrueCar's Krafcik to steer auto project

BLOG: DAVID BARKHOLZ

Marchionne makes habit of line-jumping into UAW talks

BLOG: LARRY P. VELLEQUETTE

Why did the UAW pick Fiat Chrysler?

UAW names Fiat Chrysler lead target in contract talks

Jaguar, joining key segment, prices F-Pace crossover from $43,385

2015 FRANKFURT AUTO SHOW

VW retools Tiguan with larger, lighter footprint

VW banks on redesigned Tiguan to shift focus from leadership to product

BLOG: **DAVE GUILFORD**

Marchionne's numbers take the shine off auto show glitz

Lamborghini's 2016 Huracan Spyder will start at $262,350

VW design chief De Silva will strengthen Italdesign as innovation center

Subaru sees 700,000 U.S. sales as early as 2017

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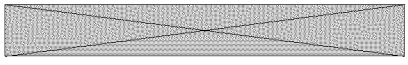
UPCOMING ...



EVENTS

» Sept. 22 - NY Marketing Seminar

» Oct. 1 - Automobilwoche Kongress

» Oct. 14 - Best Dealerships To Work For

» Jan. 12 - Automotive News World Congress

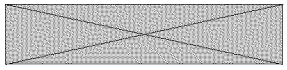
WEBINARS

» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive

» Oct. 7 at 2pm ET - Programmatic
by Rocket Fuel



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Automotive News
1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

From: Ex. 7 @ARB
Importance: Normal
Subject: Accepted:FW: VW Coordination
Start Date/Time: Mon 9/14/2015 9:00:00 PM
End Date/Time: Mon 9/14/2015 10:00:00 PM

;

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Giles, Michael (EEO)
Sent: Mon 9/14/2015 8:51:12 PM
Subject: VW Group - Ex. 4 - CBI

Ho Jim,

I was unable to submit a trimmed down supplemental XML with only a few tags for the coast down tags (these would be child tags under parent tag name ExhaustEmissionsStandardDetails).

As we have already determined, removing entries for the Ex. 4 - CBI will cause a rejection.

You mentioned possibly removing these tests from the "CTDI" which I believe means the ConfirmatoryTestDecisionInformation. How can we try that approach? Please let us know if we need to re-submit our Ex. 4 - CBI these have been selected.

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

mailto: Michael.Giles@VW.com

To: Giles, Michael (EEO)[michael.giles@vw.com]; Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Mon 9/14/2015 9:45:11 PM
Subject: FW: VW Group - Ex. 4 - CBI

Mike can you send her your XML and error report?

From: Danzeisen, Karen
Sent: Monday, September 14, 2015 5:36 PM
To: Snyder, Jim
Subject: RE: VW Group - Ex. 4 - CBI

Jim,

Without looking at their processing report that includes the submitted XML and the error msg, it's hard for me to say if anything else needs to be done in the Ex. 4 - CBI submission. I'm a little confused that he mentions Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Sorry this is such a hassle… until the Lab changes how they accept data from us we're kind of stuck with these special case problems.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Snyder, Jim
Sent: Monday, September 14, 2015 5:11 PM
To: Danzeisen, Karen
Subject: FW: VW Group - Ex. 4 - CBI

Karen , Bill went home and Mike took over. Ex. 4 - CBI

Ex. 4 - CBI

From: Giles, Michael (EEO) [mailto:michael.giles@vw.com]
Sent: Monday, September 14, 2015 4:51 PM
To: Snyder, Jim
Cc: Rodgers, William (EEO)
Subject: VW Group - Ex. 4 - CBI

Ho Jim,

I was unable to submit a trimmed down supplemental XML with only a few tags for the Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

mailto: Michael.Giles@VW.com

To: Seal, Ron[rseal3@jaguarlandrover.com]; Dalton, Joel[Dalton.Joel@epa.gov]
Cc: Mike Braisher[mbraishe@jaguarlandrover.com]; Amy Brambill[abrambil@jaguarlandrover.com]
From: Good, David
Sent: Mon 9/14/2015 10:30:36 PM
Subject: RE: PHEV emission test procedures

Ron,

Part 1066 regulations refer to SAE procedure J1711. J1711 includes a utility factor method of measuring charge depleting (CD) criteria pollutants, which should not be used for EPA. EPA uses our defeat device regulations (86.1809-12) to evaluate criteria pollutants of PHEVs during CD operation.

EPA and ARB has a couple of webinar meetings in the fall of 2013 to try to identify a "worst case" method of calculating criteria pollutants for blended PHEVs during CD operation. However, EPA, ARB & manufacturers were never able to come to an agreement on the method. Therefore EPA wasn't able to include this "worst case" method into EPA Tier 3 Part 1066 Subpart F regulations-----and EPA had to fall back on our previous policy/regulations (of using the defeat device regulations (86.1809-12) to evaluate criteria pollutants during CD operation).

The "worst case" method which was discussed in those meetings used bag 1 & 2 from the worst case CD UDDS for PHEV blended operation, and bags 3 & 4 from either the hot start CS bags 3 & 4 or the second most worst case UDDS of the CD test. We were never able resolve the issue satisfactorily (so that EPA could make the change without having included it in the Tier 3 NPRM)---so we left it out of the Tier 3 final rule.

Hope this helps.

Dave

From: Seal, Ron [mailto:rseal3@jaguarlandrover.com]
Sent: Tuesday, September 08, 2015 6:44 AM
To: Dalton, Joel; Good, David
Cc: Mike Braisher; Amy Brambill
Subject: PHEV emission test procedures

Joel, Dave,

As we get closer to certifying JLR PHEV products in North America, I would welcome some clarification of PHEV test procedures for the determination of emissions and, in particular, the statement in 86.1811-17(b)(1)(vi):

> *Measure emissions from hybrid electric vehicles (including plug-in hybrid electric vehicles) as described in 40 CFR Part 1066, subpart F, except that these procedures do not apply for plugin hybrid electric vehicles during charge-depleting operation.*

40 CFR part 1066, Subpart F references SAE J1711 which includes procedures for charge-depleting testing (FCT) for all 5 cycles (FTP, HWY, **US06, SC03** and 20F FTP).

By contrast, CARB do not define any charge-depleting testing over the US06 and SC03 cycles (these cycles are tested in charge sustaining or charge attaining modes only).

Therefore, does the statement in 86.1811-17(b)(1)(vi) (*except that these procedures do not apply for plugin hybrid electric vehicles during charge-depleting operation)* imply that for the purposes of complying with the emissions standards in 86.1811-17, only charge-sustaining testing is required over the US06 and SC03 cycles ?

Your guidance would be extremely useful.

Best Regards

Ron Seal
Emissions and Fuel Economy
Certification and Compliance
North American Markets

Jaguar Land Rover
Tel. 44 (0)2476 563995 (Internal 8732 3995)
Mobile 44 (0)7881 234223
Mobex 8712 4223

Mail drop W/10/5

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To: Drew Kodjak[drew@theicct.org]
From: Grundler, Christopher
Sent: Mon 9/14/2015 10:39:43 PM
Subject: Re: ICCT Briefing on Aviation research

Drew-so sorry I missed your call. I'm afraid I have plans for the morning and cannot meet you for breakfast. I return next week tho and if you are in town would love to do breakfast.

Seeya tomorrow

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 14, 2015, at 4:54 PM, Drew Kodjak <drew@theicct.org> wrote:
>
> Late in the day, but any chance for breakfast tomorrow?
>
> I'll see you in the afternoon either way for the Truck Wonks briefing
>
> d
>
>
>
>
> On Sep 9, 2015, at 8:55 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> Roger
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)
>
>> On Sep 9, 2015, at 8:07 AM, Drew Kodjak <drew@theicct.org> wrote:
>>
>> Welcome back!
>>
>> Would be good to catch up.
>>
>> I'll suggest some times in another note.
>>
>> Sent from my iPhone
>>
>>> On Sep 8, 2015, at 2:54 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>>>
>>> Hi Drew-
>>> Just returned from holiday so need to get back to you. Fyi I am in dc sept 14 -16 midday. Seeing
Ex. 6 for breakfast on the 16th
>>>
>>> Christopher Grundler, Director
>>> Office of Transportation and Air Quality
>>> U.S. EPA

>>> 202-564-1682 (DC)
>>> 734-214-4207 (Ann Arbor)
>>>
>>>> On Aug 28, 2015, at 5:46 PM, Drew Kodjak <drew@theicct.org> wrote:
>>>>
>>>> Hi Chris,
>>>>
>>>> I was just briefed by my team on aviation research, which includes an update of the ICCT fuel economy trends report, a US ranking of airlines, and an international (US - EU) ranking of airlines, and finally the results from the technology and cost assessment report for US aircraft in 2024 and 2034 with impressive results.
>>>>
>>>> I know you are swamped with the HDV phase 2 rule proposal at the moment, but we were wondering if you had the time and bandwidth of a briefing on this suite of relevant research.
>>>>
>>>> Two weeks that looked particularly good are the weeks of September 21 and 28th.
>>>>
>>>> Have a good weekend.
>>>>
>>>> Drew
>

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Werner, Jacqueline
Sent: Mon 9/14/2015 10:45:49 PM
Subject: We just got out of the VW call with OTAQ and CARB

Are you available to talk? Meetu and I are here for a few more minutes.

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Bunker, Byron
Sent: Mon 9/14/2015 10:52:28 PM
Subject: FW: Contact Information

From: Ex. 7 @vw.com]
Sent: Monday, September 14, 2015 3:57 PM
To: Bunker, Byron
Cc: Ex. 7
Subject: Contact Information

Hell o Byron,

If the EPA enforcement division wants to make initial contact, please have them contact me.

Contact information:

Ex. 7

Volkswagen Group of America

3800 Hamlin Road

Auburn Hills, MI 48326

Ex. 7

Initial contact to a higher level executive should be to Ex. 7

Ex. 7

Volkswagen Group of America

Ex. 7

Ex. 7

Best Regards,

Ex. 7

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 9/14/2015 11:10:49 PM
Subject: 2017 Volkswagen Tiguan First Look Review
MAIL_CONVERSATION_TOPIC: 2017 Volkswagen Tiguan First Look Review
Created: Fri 3/18/2016 6:18:24 PM

Debuting at the 2015 Frankfurt Motor Show in European-spec form, the 2017 Volkswagen Tiguan could be headed for a serious sales boost.

View article...

To: Isin, Amelie[Isin.Amelie@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Adair, Jocelyn[Adair.Jocelyn@epa.gov]; Alexander, David[Alexander.David@epa.gov]; Caballero, Kathryn[Caballero.Kathryn@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Alexander, David[Alexander.David@epa.gov]; Jorquera, Mario[Jorquera.Mario@epa.gov]; Ruske, Ross[Ruske.Ross@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Kulschinsky, Edward[Kulschinsky.Edward@epa.gov]
From: Belser, Evan
Sent: Tue 9/15/2015 1:06:34 AM
Subject: Amelie's Last Day

Hello everyone,

Tuesday, 9/15, is likely Amelie's last day in the office. This is a sad day for MSEB, but we hope the beginning of a great new chapter for Amelie and her family.

I'd mentioned that there would be a lunch for one last goodbye. Regrettably, due in large part to the dastardly conduct of VW, I have lost control of my schedule and will not be able to organize and attend. In particular I have a R9 coordination call that I've already cancelled once.

I hope some of you consider taking the time to go out for lunch, but even if you don't I'll bring some treats for the group to the 1pm branch meeting as a small gesture to recognize Amelie's huge contributions.

Evan

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/15/2015 10:11:09 AM
Subject: Carmakers curb China output as capacity glut swells
MAIL_CONVERSATION_TOPIC: Carmakers curb China output as capacity glut swells
Created: Fri 3/18/2016 6:18:23 PM

Volkswagen and other major carmakers have begun reining in Chinese production, wages and other costs, industry sources told Reuters

View article...

To: Shinkman, Susan[Shinkman.Susan@epa.gov]
From: Brooks, Phillip
Sent: Tue 9/15/2015 10:25:33 AM
Subject: Fwd: Contact Information

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 14, 2015 at 6:52:28 PM EDT
To: "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Cc: "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>, "Belser, Evan" <Belser.Evan@epa.gov>, "Kaul, Meetu" <Kaul.Meetu@epa.gov>
Subject: FW: Contact Information

From: Ex. 7
Sent: Monday, September 14, 2015 3:57 PM
To: Bunker, Byron
Cc: Ex. 7
Subject: Contact Information

Hell o Byron,

If the EPA enforcement division wants to make initial contact, please have them contact me.

Contact information:

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America

Ex. 7

Initial contact to a higher level executive should be to Ex. 7

Ex. 7

Volkswagen Group of America

Ex. 7

Best Regards,

Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Bunker, Byron
Sent: Tue 9/15/2015 11:15:30 AM
Subject: Re: Phone Call

Non-Responsive

I am going to try to catch you this morning for 15 minutes to catch up. We had a late call with CARB yesterday.

Thanks,

Byron

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Cell Phone (734) 353-9623

Sent from my cell phone.

On Sep 14, 2015, at 10:30 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

> Pls let Phil know about this request and let me know his reaction
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)
>
> Begin forwarded message:
>
> **From:** **Ex. 7**
> **Date:** September 14, 2015 at 3:09:28 PM EDT
> **To:** "grundler.christopher@epa.gov" <grundler.christopher@epa.gov>
> **Subject: Phone Call**
>
> Hello Chris,

Is there any chance we could talk for a few minutes today?

There have been many discussions over the last few weeks about arranging a meeting with you. I have vetoed any discussions of a meeting at your level to get movement on 2016 MY certification. I have made it clear that it is not helpful to try to exert any top down pressure on the situation and I know you would not accept that strategy. I have stated over the last few weeks that a meeting with you could be helpful as long as we are not asking for anything but conveying a sincere message of apology. Today I was asked to contact you on this possibility. We would like to deliver a message that our upper management takes the issue very seriously and changes are coming to ensure this will not happen again.

Recently I have been in close contact with Byron. I've mentioned this idea to him that some Board management would like to apologize directly to you. He said he would mention it to you and he also thought it could be helpful. If you are available the current proposal would be to meet in person next Tuesday September 22nd. New VW Chairman Dr. Herbert Diess and Powertrain Board member Dr. Jakob Neusser would attend

Please call me at your convenience. Evenings are not a problem for me.

Ex. 7

You have my sincerest apologies,

Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Ex. 7 (EEO)
Sent: Tue 9/15/2015 11:35:35 AM
Subject: RE: Phone Call

Hello Chris,

Thank you very much for the response. Tough times here at Volkswagen – really a disappointing situation…

Talk to you soon,

Ex. 7

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Monday, September 14, 2015 10:29 PM
To: Ex. 7 (EEO)
Subject: Re: Phone Call

Ex. 7

Thank you for your message. I am sorry I was not able to call you back. I will try to reach you tomorrow to talk about your request

Chris

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 14, 2015, at 3:09 PM, Ex. 7 @vw.com> wrote:

Hello Chris,

Is there any chance we could talk for a few minutes today?

There have been many discussions over the last few weeks about arranging a meeting with you. I have vetoed any discussions of a meeting at your level to get movement on 2016 MY certification. I have made it clear that it is not helpful to try to exert any top down pressure on the situation and I know you would not accept that strategy. I have stated over the last few weeks that a meeting with you could be helpful as long as we are not asking for anything but conveying a sincere message of apology. Today I was asked to contact you on this possibility. We would like to deliver a message that our upper management takes the issue very seriously and changes are coming to ensure this will not happen again.

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Please call me at your convenience. Evenings are not a problem for me.

Ex. 7

You have my sincerest apologies,

Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Bunker, Byron
Sent: Tue 9/15/2015 12:02:04 PM
Subject: RE: Time this AM?

Perfect. Thanks!

Ex. 6

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Grundler, Christopher
Sent: Tuesday, September 15, 2015 8:01 AM
To: Bunker, Byron
Subject: Re: Time this AM?

Will call u shortly. What #?

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 15, 2015, at 7:59 AM, Bunker, Byron <bunker.byron@epa.gov> wrote:

> It looks like you hit the ground running at 9 and don't stop until I am on a plane back to AA.
>
> If you can find 15 minutes before 9 (in the office or by phone), I think it would be good for us to briefly discuss the VW meeting request and our conversation from yesterday with ARB.
>
> Please let me know if that can work for you. Otherwise, maybe we can visit this evening by phone.
>
> Thanks,
>
> Byron
>
> **********
>
> Byron Bunker
>
> Director Compliance Division
>
> Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Grundler, Christopher
Sent: Monday, September 14, 2015 10:30 PM
To: Bunker, Byron
Subject: Fwd: Phone Call

Pls let Phil know about this request and let me know his reaction

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

Begin forwarded message:

From: Ex. 7
Date: September 14, 2015 at 3:09:28 PM EDT
To: "grundler.christopher@epa.gov" <grundler.christopher@epa.gov>
Subject: Phone Call

Hello Chris,

Is there any chance we could talk for a few minutes today?

There have been many discussions over the last few weeks about arranging a meeting with you. I have vetoed any discussions of a meeting at your level to get movement on 2016 MY certification. I have made it clear that it is not helpful to try to exert any top down pressure on the situation and I know you would not accept that strategy. I have stated over the last few weeks that a meeting with you could be helpful as long as we are not asking for anything but conveying a sincere message of apology. Today I was asked to contact you on this possibility. We would like to deliver a message that our upper management takes the issue very seriously and changes are coming to ensure this will not happen again.

Recently I have been in close contact with Byron. I've mentioned this idea to him that some Board management would like to apologize directly to you. He said he would mention it to you and he also thought it could be helpful. If you are available the current proposal would be to meet in person next Tuesday September 22nd. Ex. 7 Ex. 7 would attend

Please call me at your convenience. Evenings are not a problem for me.

Ex. 7

You have my sincerest apologies,

Ex. 7

To: Garbow, Avi[Garbow.Avi@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]
Cc: Atkinson, Emily[Atkinson.Emily@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
From: McCabe, Janet
Sent: Tue 9/15/2015 12:26:40 PM
Subject: RE: VW

yep

From: Garbow, Avi
Sent: Tuesday, September 15, 2015 8:09 AM
To: Giles-AA, Cynthia
Cc: McCabe, Janet
Subject: Re: VW

Good idea.

Avi S. Garbow

General Counsel

U.S. Environmental Protection Agency

Sent from my iPhone

On Sep 15, 2015, at 7:47 AM, Giles-AA, Cynthia <Giles-AA.Cynthia@epa.gov> wrote:

> How about if we set up a check in meeting tomorrow am to see where we are with testing, and discussions with company and CARB, and decide on path forward? Lots going on so I am thinking would be good to check in all together. OK?
>
> Cynthia

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 9/15/2015 12:49:54 PM
Subject: A.M. NEWSCAST: BMW CEO stable after collapse | Toyota crossover | Audi, Porsche vs. Tesla | Barra on FCA | More Ford aluminum | Dodge 'Star Wars' force no longer with us?

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Tue 9/15/2015 12:50:21 PM
Subject: A.M. NEWSCAST: BMW CEO stable after collapse | Toyota crossover | Audi, Porsche vs. Tesla | Barra on FCA | More Ford aluminum | Dodge 'Star Wars' force no longer with us?

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From: Belser, Evan
Required Attendees: Kaul, Meetu; karen.dworkin@usdoj.gov; Leslie Allen; Werner, Jacqueline
Location: 866-299-3188; enter 202-564-6850
Importance: Normal
Subject: Confidentiality among plaintiffs in VW case
Start Date/Time: Wed 9/16/2015 8:00:00 PM
End Date/Time: Wed 9/16/2015 9:00:00 PM

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Danzeisen, Karen
Sent: Tue 9/15/2015 2:04:27 PM
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Yeah! I'm glad that worked. Let us know when you get the corresponding Ex. 4 - CBI successfully submitted.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 10:01 AM
To: Danzeisen, Karen
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Thanks Karen.

I have successfully submitted a Decision Information revision without test Ex. 4 - CBI

@Jim – Once Ex. 4 - CBI are removed from the confirmatory test I can resubmit the Ex. 4 - CBI Of course it's understood that the Ex. 4 - CBI test will be run anyway.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 9:26 AM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Hello Bill,

Thank you for these examples illustrating what's going on. The reason you get an abnormal error when you don't submit those Ex. 4 - CBI is because Verify is accepting whatever standards you are entering and then moving on to compile the necessary data to send to our Lab for scheduling. It's at this point that it reaches back to your Decision Info (DI) and grabs the "paired data" from the Test Number section of DI. The system is not designed to handle tests with multiple bag/phase data and that's where the crash occurs.

So, I think the next step is to attempt a Decision Information correction submission where you would remove your manufacturer test numbers for test Ex. 4 - CBI It's possible we may run into some problem because Jim has selected confirmatory tests already, but I think it's worth a try rather than scraping everything right off the bat. If it does work, then the next step would be to proceed to your Ex. 4 - CBI and resubmitting that.

Let me know how it goes.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 8:22 AM
To: Danzeisen, Karen; Snyder, Jim
Cc: Giles, Michael (EEO)
Subject: Volkswagen PHEV Ex. 4 - CBI
Importance: High

Hello Karen and Jim,

I have attached the Supplemental Information (SI) and rejection submission report which include all test types required by the confirmatory test decision Ex. 4 - CBI

Additionally as indicated below we only get a Verify processing error when attempting to submit the SI with test Ex. 4 - CBI emission names other than those emissions names listed in the attached rejection submission report.

Please assist in resolving this matter today to avoid test scheduling problems.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/15/2015 7:44:33 AM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Tue Sep 15 07:44:21 EDT 2015 while processing document: Ex. 4 - CBI

Vehicle ID: Ex. 4 - CBI

Vehicle Configuration #: 0

Transaction Identifier: Ex. 4 - CBI

From: Alexander, David
Required Attendees: Belser, Evan; Isin, Amelie; Werner, Jacqueline; Adair, Jocelyn; Caballero, Kathryn; Kaul, Meetu; Jorquera, Mario; Ruske, Ross; Orehowsky, Gregory; Kulschinsky, Edward
Importance: Normal
Subject: lunch with Amelie
Start Date/Time: Tue 9/15/2015 3:45:00 PM
End Date/Time: Tue 9/15/2015 4:45:00 PM

A convocation of the willing will meet for a Last Lunch with Amelie in the hall outside 1111-B. Last Lunch Location to be determined by the contingent with the loudest voices. RSVP.

See you then,

David

From: Belser, Evan
Sent: Monday, September 14, 2015 9:07 PM
To: Isin, Amelie; Werner, Jacqueline; Adair, Jocelyn; Alexander, David; Caballero, Kathryn; Kaul, Meetu; Alexander, David; Jorquera, Mario; Ruske, Ross; Orehowsky, Gregory; Kulschinsky, Edward
Subject: Amelie's Last Day

Hello everyone,

Tuesday, 9/15, is likely Amelie's last day in the office. This is a sad day for MSEB, but we hope the beginning of a great new chapter for Amelie and her family.

I'd mentioned that there would be a lunch for one last goodbye. Regrettably, due in large part to the dastardly conduct of VW, I have lost control of my schedule and will not be able to organize and attend. In particular I have a R9 coordination call that I've already cancelled once.

I hope some of you consider taking the time to go out for lunch, but even if you don't I'll bring some treats for the group to the 1pm branch meeting as a small gesture to recognize Amelie's huge contributions.

Evan

To: Engel, Bethany (ENRD)[Bethany.Engel@usdoj.gov]; Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]
From: Kaul, Meetu
Sent: Tue 9/15/2015 2:22:41 PM
Subject: VW - FW: Draft to do list
VW Diesel To Do List 9-13-2015 EB Edits.docx
OCE To Do List Regarding VW Sept 14-18.docx

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Belser, Evan
Sent: Sunday, September 13, 2015 9:49 PM
To: Brooks, Phillip; Kaul, Meetu; Orehowsky, Gregory
Cc: Werner, Jacqueline
Subject: Re: Draft to do list

I made minor edits to the draft to-do list. Attached.

In an effort to keep all of us synchronized, I've also prepared an OCE to-do list to complement the EPA-wide to-do list. This is also attached. See what you think and share with our management if you please.

Evan

From: Brooks, Phillip
Sent: Sunday, September 13, 2015 5:16 PM
To: Kaul, Meetu; Orehowsky, Gregory
Cc: Belser, Evan; Werner, Jacqueline
Subject: FW: Draft to do list

I did not look closely to see whether there are significant changes form the last To Do list, but please feel free to identify other actions you think might be necessary or helpful.

Many thanks to Meetu and anyone who helped her get a draft MOU together. It moves the ball forward significantly.

From: Bunker, Byron
Sent: Sunday, September 13, 2015 4:55 PM
To: Hengst, Benjamin
Cc: Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Wehrly, Linc
Subject: FW: Draft to do list

Hi Ben,

Can your team help organize times for briefings with the appropriate OCIR and Press (OPA/OAR/OTAQ) staff tomorrow?

I am assuming we can use the materials already generated and get those teams quickly up to speed during the day tomorrow. I am guessing an hour with each or maybe they can be combined? I should be in DC by 9:30 or so tomorrow.

It would be best if Byron, Linc Wehrly, Phil Brooks, Jacqueline Werner and Evan Belser could participate. But given the timing, if we can get at least one from OTAQ and one from OECA that should be good enough.

I think the ARLO team is out for the New Year's Holiday. It might make sense to copy Mark Kataoka and David Orlin, but I don't believe they will be able to make it.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Bunker, Byron
Sent: Sunday, September 13, 2015 3:30 PM
To: Grundler, Christopher
Cc: Cook, Leila; Hengst, Benjamin; Brooks, Phillip
Subject: Draft to do list

Hi Chris & Phil,

Please review and let me know if it is missing any major elements. It is probably a little detailed for the Administrator, but I thought it would be better that Janet see all of the open questions she knew from the call reflected in the checklist.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]; Engel, Bethany (ENRD)[Bethany.Engel@usdoj.gov]
Cc: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/15/2015 2:29:51 PM
Subject: FW: Contact Information

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Bunker, Byron
Sent: Monday, September 14, 2015 6:52 PM
To: Brooks, Phillip
Cc: Werner, Jacqueline; Belser, Evan; Kaul, Meetu
Subject: FW: Contact Information

From: Ex. 7
Sent: Monday, September 14, 2015 3:57 PM
To: Bunker, Byron
Cc: Ex. 7
Subject: Contact Information

Hell o Byron,

If the EPA enforcement division wants to make initial contact, please have them contact me.

Contact information:

Ex. 7 Cell

Initial contact to a higher level executive should be to Ex. 7

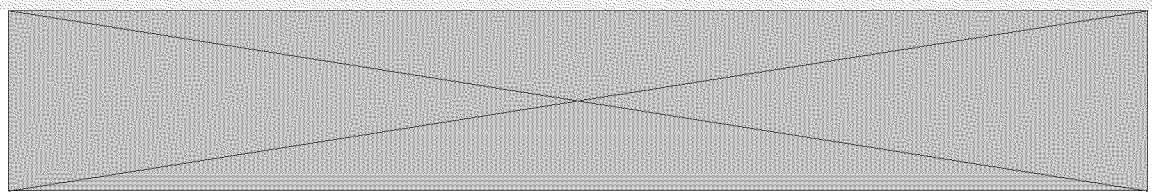
Ex. 7

Best Regards,

Ex. 7

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Tue 9/15/2015 4:08:32 PM
Subject: Green Car Report Daily Headlines

Email not displaying correctly? View it in your browser.



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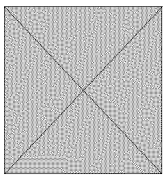
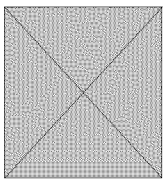
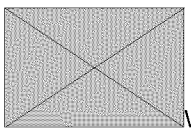




The latest from your friends at GCR:

Toyota Shows Second Concept For Subcompact Crossover At Frankfurt; Hybrid Model Expected

Sep 15, 2015 03:40 pm | feedback@highgearmedia.com (John Voelcker)

 With sales of small crossover utility vehicles growing, not just in North America but around the world, two of the world's three largest automakers still don't have entries in the segment. One of them, Toyota, announced today at the Frankfurt Motor Show that it had plans to change that. It displayed a second version of its C-HR concept car, and...

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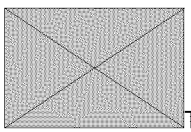
Porsche Mission E, Audi e-tron quattro, Infiniti Q30: Today's Car News

Sep 15, 2015 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today, we have debuts from the 2015 Frankfurt Motor Show, including the Porsche Mission E electric-car concept, Audi e-tron quattro electric SUV

concept, and the Infiniti Q30 compact. All this and more on Green Car Reports. The Porsche Mission E concept is a 600-horsepower electric sport sedan concept that seems to have the Tesla Model S in its...

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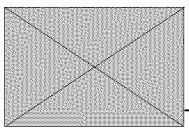
New VW Bus Concept Coming To CES, Electric Power For Production Version?

Sep 15, 2015 12:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

 To anyone who grew up in the Sixties or Seventies, the Volkswagen Microbus is generally pretty high on the list of cool cars. Perhaps owing to the model's pop-icon status, the notion of a new Microbus has been teased a couple of times over the past few years. Now it appears Volkswagen is preparing another Microbus concept. DON'T MISS: Electric...

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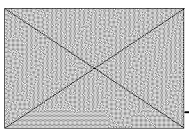
Infiniti Q30 Luxury Compact Hatchback: Frankfurt Auto Show Unveiling

Sep 15, 2015 12:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Two years after unveiling a concept version of its first compact luxury car, Infiniti unveiled the real thing at the 2015 Frankfurt Motor Show. The 2017 Infiniti Q30 takes Nissan's luxury brand into a new area of the market, with a little help from Mercedes-Benz. That's because the Q30 shares its underpinnings with the European-market...

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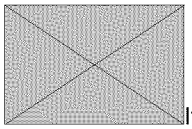
Audi e-Tron Quattro Concept: 2018 Q6 Electric Car

Previewed At Frankfurt Motor Show

Sep 15, 2015 08:30 am | feedback@highgearmedia.com (John Voelcker)

 It's been teased and previewed and discussed and debated, and now the concept is real: The Audi e-Tron Quattro Concept debuted at today's Frankfurt Motor Show. A styling concept that is likely to reach production as the Audi Q6, a more coupe-like crossover utility vehicle similar to the BMW X6, the key feature of the concept car is its...

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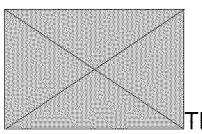
2017 Volkswagen Tiguan: Compact Crossover Revealed At Frankfurt Auto Show

Sep 15, 2015 07:30 am | feedback@highgearmedia.com (Stephen Edelstein)

 The Volkswagen Tiguan compact crossover is about to be renewed, with a completely redesigned model debuting at the 2015 Frankfurt Auto Show. And right alongside the production versions of the 2017 Volkswagen Tiguan is a concept with a plug-in hybrid powertrain. The second-generation Tiguan adopts the MQB platform used by numerous other VW Group...

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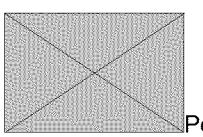
2018 Porsche Mission E: 600-HP Electric Sport Sedan Concept Targets Tesla

Sep 15, 2015 05:30 am | feedback@highgearmedia.com (John Voelcker)

 Perhaps no German prestige carmaker was more rattled than Porsche by the sudden appearance of electric-car startup Tesla Motors. With the sports-car brand having just launched its first sedan, the Panamera,

the arrival of the Tesla Model S in 2012 offered an alternative take on a large luxury sedan: one offering stunning performance not from a...

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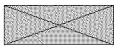

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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Tue 9/15/2015 7:42:28 PM
Subject: P.M. NEWSCAST: Nissan gets a Gripz in Frankfurt | Mopar-enhanced Jeeps | A new Dawn for Rolls-Royce | Audi goes over-the-top | Mirrorless cars?

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Mopar-enhanced Jeeps »
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To: Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Niebling, William[Niebling.William@epa.gov]; Blubaugh, Jim[Blubaugh.Jim@epa.gov]; Bromm, Susan[Bromm.Susan@epa.gov]; Schultz, Rebecca[Schultz.Rebecca@epa.gov]
From: Evarts, Dale
Sent: Tue 9/15/2015 7:42:45 PM
Subject: Followup on AA Giles briefing by OAR: Latest Fuel Quality Standards for China
ICCTupdate_ChinaVfuelquality_jan2014.pdf

Phil,

We wanted to followup on your questions about fuel quality with some up-to-date info. Attached is a useful summary and set of charts (pp 1-2) on fuel quality and the China emission standards that the International Council on Clean Transportation developed in January 2014. The info is still current except the last implementation date for China V fuels (both diesel and gasoline). Since this paper, China's State Council has accelerated the required timeline for 10 ppm sulfur (diesel and gasoline) to be available by the end of 2016. The current level of sulfur is outlined under China IV in the chart.

Hope that's helpful and please let us know if you have additional questions.

Best,

Dale

Dale Evarts

Group Leader, Climate, International & Multimedia Group

Office of Air Quality Planning & Standards (C504-04)

US Environmental Protection Agency

Research Triangle Park, North Carolina 27711

evarts.dale@epa.gov

(+1) 919.541.5535 c: (+1) 919.280.6546

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POLICY UPDATE

JANUARY 2014

CHINA V GASOLINE AND DIESEL FUEL QUALITY STANDARDS

ICCT **POLICY UPDATES** SUMMARIZE REGULATORY AND OTHER DEVELOPMENTS RELATED TO CLEAN TRANSPORTATION WORLDWIDE.

In February 2013, China's State Council called for nationwide desulfurization of gasoline and diesel fuel to a maximum sulfur content of 10 parts-per-million (ppm) by the end of 2017.[1] Over the course of the remainder of 2013, regulatory agencies in China translated the State Council's directive into formal regulatory language. Ultimately, three new standards were issued: China IV diesel (50 ppm) in February 2013, China V diesel (10 ppm) in June 2013, and China V gasoline (10 ppm) in December 2013. Together, these standards lay out a roadmap for improving China's nationwide fuel to world-class quality. The improved fuel will reduce emissions from all motor vehicles while enabling advanced emission control technologies to be deployed, yielding critical reductions in the air pollution impacts from China's vehicle fleet.

This policy update summarizes the historical and future timelines for China's nationwide fuel quality improvement, including comparison with corresponding vehicle emission standard implementation, reviews the key changes made in each of the recently issued standards, introduces the fiscal policy measures China has announced to encourage the supply of these higher quality fuels, and compares China's standards with multiple international precedents.

SUMMARY OF NATIONWIDE TIMELINES

The following tables summarize the history and future of China's nationwide fuel quality improvement. Note that these tables show nationwide standards only; some sub-national municipalities and provinces have implemented their own fuel quality standards or will adopt national standards in advance of the nationwide timeline.[2]

icct
THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

1 Original announcement available online at: http://www.gov.cn/ldhd/2013-02/06/content_2328473.htm; summarized in March 2013 ICCT policy update here: http://www.theicct.org/breakthrough-timeline-china-ulsf-standards

2 Beijing already has 10 ppm sulfur content gasoline and diesel supply, while Shanghai has 10 ppm sulfur gasoline only. Other regions, including the greater Beijing, greater Shanghai, and Pearl River Delta regions, are required to implement 10 ppm gasoline and diesel standards by the end of 2015, two years ahead of the nationwide deadlines.

VW FOIA, EPA 06/20/2017 2017-FFP_023422

China gasoline fuel quality roadmap

Stage	Standard	Maximum sulfur level (ppm)	Date standard issued	Date standard implemented
China I	GB 17930-1999	lead-free requirement	28 Dec 1999	1 Jan 2000
China II	GB 17930-1999 (revised)[3]	500	2 Dec 2004	1 Jul 2005
China III	GB 17930-2006	150	6 Dec 2006	31 Dec 2009
China IV	GB 17930-2011	50	12 May 2011	Phased-in by 31 Dec 2013
China V	GB 17930-2013	10	18 Dec 2013	Phased-in by 31 Dec 2017

China diesel fuel quality roadmap

Stage	Standard	Maximum sulfur level (ppm)	Date standard issued	Date standard implemented
China I	GB 252-2000	2000	27 Oct 2000	1 Jan 2002
China II	GB/T 19147-2003	500 (voluntary)	23 May 2003	1 Oct 2003
China III	GB 19147-2009	350	12 Jun 2009	Phased-in 1 Jan 2010 – 1 Jul 2011
China IV	GB 19147-2013	50	7 Feb 2013	Phased-in by 31 Dec 2014
China V	GB 19147-2013	10	8 Jun 2013	Phased-in by 31 Dec 2017

A comparison of the timelines for implementation of China's nationwide fuel quality standards with motor vehicle tailpipe emission standards is shown below. Note the occasional "mismatch" between fuel quality and corresponding vehicle emission standards.

	Gasoline		Diesel	
Stage	Fuel quality	Light-duty vehicle emissions	Fuel quality	Heavy-duty vehicle emissions
I	1 Jan 2000	1 Jul 2000	1 Jan 2002	1 Sep 2001
II	1 Jul 2005	1 Jul 2005	1 Oct 2003	1 Sep 2004
III	1 Jan 2010	1 Jul 2008	1 Jul 2011	1 Jan 2008
IV	1 Jan 2014	1 Jul 2013	1 Jan 2015	1 Jul 2013[4]
V	1 Jan 2018	1 Jan 2018	1 Jan 2018	TBD[5]

Notes: Nationwide implementation dates shown. Vehicle dates shown are dates for all vehicle sales and registrations; in most cases the implementation date for new vehicle type approvals are earlier.

3 Revision announcement available online at: http://www.caam.org.cn/guojiabiaozhui/20110513/1005055894.html

4 This date represents a 30-month delay from the original intended implementation date of 1 Jan 2011.

5 The original standard was issued with an implementation date of 1 Jan 2013, but the implementation has been delayed indefinitely.

VW FOIA, EPA 06/20/2017 2017-FFP_023423

OVERVIEW OF CHANGES

GASOLINE

The following table summarizes the changes made in the progression from China III to China V gasoline standards. Besides the sulfur reductions, notable changes include the reduction in maximum permitted manganese levels and reductions in minimum octane requirements.

Parameter	Change from China III à China IV	Change from China IV à China V
Sulfur content (ppm)	Reduced 150 à 50	Reduced 50 à 10
Manganese limit (mg/l)	Reduced 16 à 8	Reduced 8 à 2
Olefin content	Reduced 30% à 28%	Reduced 28% à 24%
Summer RVP (kPa)	Upper limit reduced from 72 à 68; lower limit of 40 added	Upper limit reduced from 68 à 65; also, requirement added that southern provinces Guangdong, Guangxi, and Hainan must comply with summer RVP limits year round
Winter RVP (kPa)	Upper limit reduced from 88 à 85; lower limit of 42 added	Lower limit increased 42 à 45
Octane (RON)	No change	Minimum RON levels decreased 90/93/97 à 89/92/95; also 98 RON standard added
Density (kg/m^3)	N/A	New requirement of 720~775 at 20°C

DIESEL

The changes made in the progression from China III to V for diesel are shown below. Besides sulfur reductions, the only changes were to the cetane number requirements.

Parameter	Change from China III à China IV	Change from China IV à China V		
Sulfur content (ppm)	Reduced 350 à 50	Reduced 50 à 10		
Cetane number	No change	#5, #0, #-10	#-20	#-20, #-35, #-50
		Increased 49 à 51	Increased 46 à 49	Increased 45 à 47

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ACCOMPANYING FISCAL POLICY

China's fuel prices are fixed by the National Development and Reform Commission (NDRC). In September 2013, the NDRC announced new price increases for higher quality fuels, raising the prices of China IV gasoline and diesel by 290 and 370 RMB/ton ($48 and $61/ton), respectively, and raising the prices of China V gasoline and diesel by an additional 170 and 160 RMB/ton ($28 and $26/ton), respectively. The total price increase from China III to China V is equivalent to approximately 5-6% of the existing fuel prices for gasoline and diesel.[6] The new pricing changes are designed to encourage and assist China's refineries to meet the State Council fuel quality improvement timeline. The NDRC's announcement, which also emphasized the importance of and mechanisms for ensuring compliance and enforcement of fuel quality, further underscores the Chinese government's commitment to ensuring the fuel quality timeline is met and commensurate air quality improvements are achieved.

COMPARISON WITH INTERNATIONAL STANDARDS

China's fuel quality standards mostly – but not entirely – follow European precedent. The following tables provide detailed comparisons of China's recent nationwide fuel quality parameters with those of Europe, the United States, and the Worldwide Fuel Charter.

6 More context and analysis available in an ICCT September 2013 blog post: http://www.theicct.org/blogs/staff/contextualizing-chinas-fuel-pricing-announcement

VW FOIA, EPA 06/20/2017 2017-FFP_023425

Selected gasoline parameters

Fuel Property	China III	China IV	China V	India Bharat Stage III	India Bharat Stage IV	Euro III 98/70/EC	Euro IV 2003/17/EC	Euro V 2009/30/EC	EPA RFG average (2005)[1]		EPA conventional gasoline average (2005)[2]		Worldwide Fuel Charter Category 4[3]
									Summer	Winter	Summer	Winter	
Research Octane (RON), min.	97-90	97-90	95-88	91	91	95–91	95–91	95–91	NS				91–95–98
Motor Octane (MON), min.	88-85	88-85	90-84	81	81	85–81	85–81	85–81	NS				82.5–85–88
Anti-Knock Index (AKI), min.	NS	NS	NS	NS	NS	NS	NS	NS	Recommended: 87–87–91 with seasonal and altitudinal variations ASTM D4814				NS
Aromatics, vol%, max.	40	40	40	42	35	42	35	35	20.7[4]	19.5[4]	27.7	24.7	35
Olefin, vol%, max.	30	28	24	21	21	18	18	18	11.9	9.2	12	11.6	10
Benzene, vol%, max.	1	1	1	1	1	1	1	1	0.66[5]	0.66[5]	1.21[5]	1.15[5]	1
Sulfur, ppm, max.	150	50	10	150	50	150	50	10	71[6]	81[6]	106[6]	97[6]	10
Gum Content, mg/100ml, max.	5	5	5	4	4	NS	NS	5	5				5
Density 15C, kg/m³	N/A	N/A	720-775 (20°C)	720–775	720–775	NS	NS	720–775	NS	NS	NS	NS	715–770
RVP, kPa	88 Winter (Nov-April) 72 Summer (May-Oct) max.	42-85 Winter 40-68 Summer max.	45-85 Winter 40-65[7] Summer max.	60	60	60/70 max.	60/70 max	60/70 max.	47.6[8] (6.91 psi) max.	82 (11.89 psi) max.	57.2[8] (8.3 psi)	83.6 (12.12 psi)	Temp > 15°C: 45–60 15°C>=T>5°C: 55–70 5°C>=T> -5°C: 65–80 -5°C>=T>-15°C: 75–90 Temp < -15°C : 85–105
Lead, mg/l, max.	5	5	5	5	5	5	5	5	13				NS
Manganese, mg/liter, max.	16	8	2	NS	NS	NS	NS	MMT<6 (by 2011) MMT<2 (by 2014)	NA[9]	NA[9]	NA	NA	ND
Oxygen, % m/m	2.7 (max.)	2.7 (max.)	2.7 (max.)	2.7	2.7	2.7 (max.)	2.7 (max.)	2.7 (max.)	2.40	2.37	0.95	1.08	2.7

NS = Not specified; NA = Not available; ND = Nondetectable; NAP = Not applicable

Notes:

1. National average of the 2005 RFG survey data are shown here. Even though the EPA establishes limits on sulfur, summer RVP, aromatics, and benzene for reformulated gasoline (RFG), compliance is determined based on the complex model estimates of VOC, toxic substances, and NOx emissions relative to the emissions of the 1990 baseline gasoline
2. Presented here are national averages in 2005 based on conventional gasoline survey data. The EPA sets limits on benzene and sulfur content as well as summer RVP but not for other parameters. Individual producer or importer demonstrates compliance with the conventional gasoline standard by showing that emissions of VOC, CO, NOx, and toxic air pollutants from conventional gasoline produced or imported do not increase over levels from the gasoline it produces or imports in 1990. If a producer or importer is unable to develop adequate 1990 data, it must use a "statutory baseline," which is the average quality of all 1990 U.S. gasoline
3. Applicable to markets requiring Euro 4, Euro 5 Heavy-Duty, U.S. EPA Tier 2 or 2007/2010 Heavy-Duty On-Highway, or equivalent emission standards
4. The reformulated gas provision of the Clean Air Act limits the aromatic content of RFG to 25 percent by volume
5. The Clean Air Act limits benzene content of RFG gasoline to 1 percent by volume; the Mobile Source Air Toxics final rule further tightens the benzene limit to 0.62 percent for all gasoline (reformulated and conventional) on an annual average basis beginning January 1, 2011. While the 0.62 percent limits could be met through an averaging, banking, and trading program, the actual annual average of gasoline produced or imported by any refiner or importer must not exceed 1.3 percent by volume, beginning July 1, 2012
6. Effective from 2006, the gasoline sulfur limit for all gasoline is 30 ppm for the annual refinery average and a cap of 80 ppm for all production
7. Guangdong, Guangxi, and Hainan must comply with summer RVP limits year round
8. Clean Air Act specifies a limit of 62.1 kPa (9 psi) for any gasoline sold during the high ozone season (Jun. 1 to Sept. 15). More stringent volatility (summer RVP) requirements are set for RFG, which vary by the region and month, and range from 48.3-62.1 kPa (7-9 psi). EPA provides a 1.0-psi RVP allowance for gasoline containing ethanol at 9 to 10 volume percent.
9. Clean Air Act requires that RFG to contain no heavy metal, including lead and manganese.

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Selected diesel parameters

Fuel Property	China III	China IV	China V	India Bharat Stage II	India Bharat Stage III	India Bharat Stage IV	Euro III	Euro IV	Euro V	EPA	CARB		Worldwide Fuel Charter Category 4[2]
										Conventional diesel	Reference fuel[1]	Designated equivalent limit[1]	
Polyaromatics, vol%, max.	11	11	11	-	11	11	11	11	8	NS	1.4	3.5	2
Sulfur, ppm, max.	350	50	10	500	350	50	350	50	10	15	15	15	10
Cetane number, min.	49	49	51	48	51	51	51	51	51	Cetane index >= 40 or aromatics <= 35%[3]	48	53	55
Density 15°C, kg/m³, min.	810-850 (20°C)	810-850 (20°C)	810-850 (20°C)	820–860	820–845	820–845	820–845	845	845	NS	NS	NS	820[4]
Flash point, Abel, °C, min.	55	55	55	35	35	35	55	55	55	NS	54	NS	55
Ash content, % m/m, max.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	NS	NS	NS	0.001
Viscosity 40°C, mm²/s	3.0-8.0	3.0-8.0	3.0-8.0	2.0–5.0	2.0–5.0	2.0–4.5	2.0–4.5	2.0–4.5	2.0–4.5	NS	2.0–4.1	NS	2.0[5]

PP = Diesel pour point; NS=Not specified

Notes:

1. The California regulations allow flexibility in meeting the limit on aromatics. Producers or importers could either produce a fuel that meets the designated equivalent limits or certify a fuel formulation by demonstrating that the exhaust emission reduction of a candidate fuel is equivalent to those with the reference fuel; the "low-emission" fuels typically have a much higher cetane number and lower sulfur but higher aromatics, higher polycyclic aromatics, and higher nitrogen than the reference fuel
2. Applicable to markets requiring Euro 4, Euro 5 Heavy-Duty, U.S. EPA Tier 2 or 2007/2010 Heavy-Duty On-Highway, or equivalent emission standards
3. The EPA requires either a minimum cetane index of 40 or a maximum aromatic content of 35 percent. Premium diesel fuel defined by the National Institute of Standards and Technology (NIST) requires a minimum cetane number of 47.0. It is up to individual states to adopt the NIST premium diesel requirements
4. Can be relaxed to 800 kg/m3 when ambient temperatures are below -30°C. For environmental purposes, a minimum of 815 kg/m3 can be adopted
5. Can be relaxed to 1.5 mm2/s when ambient temperatures are below -30°C and to 1.3 mm2/s when ambient temperatures are below -40°C

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

MAR 14 2014

Hyundai Motor Company
Choong-Ho Kim, CEO
231, Yangjae-Dong Seocho-Ku
Seoul, 137-938, South Korea

Hyundai Motor America
David L. Zuchowski, CEO
10550 Talbert Avenue
Fountain Valley, CA 92708

Through: Adam M. Kushner
Hogan Lovells US LLP
Columbia Square
555 Thirteenth Street, NW
Washington, DC 20004

Re: Notice of Violation

Dear Mr. Kim and Mr. Zuchowski:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Hyundai Motor Company and Hyundai Motor America (collectively, Hyundai) regarding compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that certain 2012 and 2013 Hyundai vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Hyundai therefore violated section 203 of the CAA, 42 U.S.C. § 7522, by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles.

VW FOIA, EPA 06/20/2017 2017-FFP_023428

Governing Law

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. These laws aim to protect human health and the environment by reducing emissions of greenhouse gases and other pollutants from mobile sources of air pollution. The EPA's allegations here concern motor vehicles, specifically light-duty vehicles, for which 40 C.F.R. Parts 86 and 600 set emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions.

Light-duty vehicles must satisfy emission standards for certain air pollutants. 40 C.F.R. §§ 86.1811-04, 86.1811-09, 86.1811-10. Beginning with the 2012 model year, greenhouse gases are among these air pollutants. 40 C.F.R. § 86.1818-12 (setting exhaust emission standards for an aggregate group of six greenhouse gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby regulates the introduction of vehicles into United States commerce. Each COC covers only a singular test group, which is comprised of vehicles with similar emissions.

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC, by the terms on its face, "covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary and appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

Manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or causing any of the foregoing acts with respect to any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1).

Certification Requirements Regarding Road Load Force

A vehicle's *road load force* is one of the vehicle specifications manufacturers must describe in a COC application. 40 C.F.R. §§ 86.129-00, 86.1844-01; EPA, Advisory Circular 55C: Determination and Use of Alternative Dynamometer Power Absorber Settings (Dec. 12, 1986). Road load force is the total force encountered by a vehicle by reason of motion on a level, smooth surface. This includes the internal forces (e.g., driveline friction) and external forces (e.g., wind resistance) that cause a vehicle to lose speed. A vehicle's road load force and its greenhouse gas emissions are closely correlated. A vehicle with higher road load force needs to

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overcome greater resistance to move at a given speed compared to a vehicle with lower road load force, and therefore consumes more fuel and emits more greenhouse gases.

Road load force is a function of speed. Specifically, road load force is stated in terms of a quadratic equation in which the variable is speed and the three coefficients (called *road load coefficients*) are numbers derived from testing the vehicle. Using this equation, one may determine the road load force of a vehicle at any given speed.

Road load coefficients determine the laboratory settings for testing vehicle tailpipe emissions. Test vehicles are mounted on a piece of equipment called a chassis dynamometer that allows the test vehicle's wheels to turn while the vehicle remains motionless. A vehicles' road load coefficients are used to program the chassis dynamometer to impose force on the vehicle's turning wheels to simulate the road load force that vehicle experiences in real-world driving conditions. If accurate road load coefficients are used, then the vehicle's tailpipe emissions during laboratory testing are identical to its emissions during real-world driving conditions. However, a test vehicle consumes less fuel and emits less greenhouse gases compared to real-world driving conditions if the dynamometer is programmed with inaccurately low road load coefficients.

Violations

Each Hyundai vehicle identified by the table below has a higher road load force than was described in the application for the COC that purportedly covers the vehicle. Accurate road load force is critical for obtaining accurate results in the vehicle emission testing for determining greenhouse gas emissions and fuel economy. Therefore, each production vehicle within the test groups identified by the table below does not conform in a material respect, namely road load force, to the vehicle specifications described in the COC application. As such, Hyundai violated section 203 of the CAA, 42 U.S.C. § 7522, each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups.

The EPA discovered these violations in 2012 in the course of performing audit testing. This involved running coastdown tests (the test to measure road load force) on various production vehicles from many manufacturers. In a coastdown test, one drives a test vehicle on an outdoor track, allows the vehicle to coast from various speeds, and measures how quickly the vehicle loses speed. Coastdown testing of certain representative Hyundai vehicles yielded road load forces that were higher, in some cases substantially higher, than Hyundai reported in the application for the COCs that purportedly covered those vehicles.

The EPA subsequently investigated the coastdown test protocol Hyundai had used to measure the road load force of vehicles for purposes of applying for EPA certification. That protocol appears to have included numerous elements that, once aggregated, generated inaccurately low road load forces. For example, Hyundai restricted its testing to a temperature range where its vehicles coasted farther and faster, and the company prepared vehicle tires for optimized results.

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In processing test data to derive road load coefficients, Hyundai chose favorable results rather than the average results from a large number of tests. In certain cases, Hyundai relied predominantly on data gathered when test vehicles were aided by a tailwind.

In November 2012, Hyundai lowered the fuel economy ratings for many of its model year 2011, 2012, and 2013 vehicles. Just as Hyundai *over-stated* the fuel economy ratings of these vehicles, the company *under-reported* their greenhouse gas emissions. Accurate reporting of greenhouse gas emissions is critical to compliance with the greenhouse gas emission standards and the integrity of this Clean Air Act program. Those standards took effect in the 2012 model year and will become increasingly stringent with each subsequent model year.

Throughout model year 2011, 2012, and 2013, Hyundai generated greenhouse gas *credits* under the EPA's averaging, banking, and trading program. That program allows automakers whose fleet emits less greenhouse gas emissions than the applicable standard to generate credits (each representing a metric ton of greenhouse gases) in the amount by which they over complied. Subsequently, these credits can be used by the generating automaker (or another automaker that purchases the credits) to achieve compliance with the greenhouse gas emission standards. 40 C.F.R. § 86.1865-12(k). To the extent that Hyundai's credits are based on under-reported greenhouse gas emissions, they cannot be used by Hyundai or any other company for compliance purposes.

Model Year	Test Group	Model(s)
2012	CHYXV01.6RW5	Accent
	CHYXV01.8SW5	Elantra
	CHYXV01.8SPC	Elantra PZEV
	CHYXV01.6AW5	Veloster
2013	DKMXV01.6DBE	Accent, Veloster
	DKMXV02.0DCE	Elantra, Elantra Coupe, Elantra GT
	DHYXV01.8BDP	Elantra PZEV, Elantra Coupe PZEV, Elantra GT PZEV
	DHYXV02.01TE	Sante Fe Sport 2.0L Turbo
	DHYXV02.41UE	Sante Fe Sport 2.4L
	DHYXV01.61CE	Veloster Turbo

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Enforcement

The EPA may bring an enforcement action for these violations by referring this matter to the United States Department of Justice with a recommendation that a civil complaint be filed in federal district court. CAA §§ 204, 205, 42 U.S.C. §§ 7523, 7524. Any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject to a civil penalty of up to $37,500 for each such vehicle. CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

The EPA is available to discuss this matter with you. Please contact Evan M. Belser, the EPA attorney assigned to this matter, to discuss this NOV. Mr. Belser can be reached as follows:

Evan M. Belser
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-6850
belser.evan@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

VW FOIA, EPA 06/20/2017 2017-FFP_023432

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 9/15/2015 8:27:57 PM
Subject: DAILY: The growing ranks of anxious new Detroit 3 hires | Mercedes' Tesla fighter | The future look of Mercedes-Benz | Toyota C-HR refines compact crossover plans | Why Google won't be an automaker

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BLOG: **NICK BUNKLEY**

In this round of UAW talks, a high number of anxious new hires

The last time that such a large proportion of the UAW membership was new to the contract negotiation process was probably when the UAW was created eight decades ago.

Mercedes confirms Tesla fighter

Mercedes-Benz will bring out an electric-powered Tesla fighter in the next few years. It will have a range of 250 to 310 miles, Daimler's r&d chief said.

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Google does not intend to become car maker, CEO says

Toyota confirms compact crossover plans with new C-HR

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Not wanting to miss out on one of the hottest trends in the industry, Toyota said it will jump into the compact crossover segment next year with a new model it's teasing as the C-HR.

Google does not intend to become a vehicle manufacturer, the company's self-driving car director for Germany, Austria and Switzerland said today at the Frankfurt auto show.

Mercedes-Benz's F 015 Luxury in Motion intelligent Aerodynamic Automobile concept unveiled Monday in Frankfurt will influence its design language for years to come. The concept's interior will show up in the redesigned E-class sedan next year.

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VW will transform lineup into 'smartphones on wheels,' Winterkorn

says

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Rolls-Royce mulls electric car as new regulations dawn

BLOG: RICHARD JOHNSON

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BLOG: DIANA T. KURYLKO

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BLOG: RYAN BEENE

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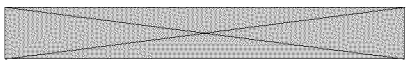

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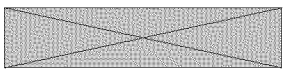

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc:
From: Ex. 7
Sent: Tue 9/15/2015 8:58:30 PM
Subject: Preservation of Evidence Related to Volkswagen Mobile Source Matter
ENV_ENFORCEMENT-#2546441-v1-VW__091515_lit_hold_to_EPA.PDF

Meetu,

Please see the attached letter.

Sincerely,

Ex. 7

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

Ex. 7

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

To: eDiscovery, eDiscovery[eDiscovery@epa.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Robinson, Milton
Sent: Tue 9/15/2015 9:26:51 PM
Subject: FW: Volkswagen

Would you please have someone on the eDiscovery Team contact and work with Meetu Kaul to assist her with issuing a litigation hold. This litigation hold needs to be issued immediately.

Thank you.

Milton H. Taylor Robinson | Attorney-Advisor

Office of Administration and Policy | Information Technology Division

US Environmental Protection Agency
1200 Pennsylvania Avenue NW | Mail Code 2201A|Washington, DC 20460

Office: 202-564-2538

From: Ex. 7
Sent: Tuesday, September 15, 2015 4:28 PM
To: Robinson, Milton
Subject: Volkswagen

ATTORNEY WORK PRODUCT

Milton,

Can you please have someone help Meetu Kaul, an attorney in OECA, issue a litigation hold through Encase? Ex. 5, 7

Ex. 5, 7

Ex. 5, 7

Thanks,

Ex. 7

Senior Counsel

Environmental Enforcement Section

Environment and Natural Resources Division

U.S. Department of Justice

Ex. 7

If you are not the intended recipient of this message, please notify the sender.

To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
Cc: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/15/2015 10:49:10 PM
Subject: VW From DOJ - Draft meeting agenda
ENV_ENFORCEMENT-#2546481-v1-VW-_Agenda_for_17_Sep_2015_Cruden_Meeting.docx

Ben asked Josh to put together a draft agenda for the Thursday meeting (attached). Phill is marked to brief on the status of various issues at play.

Ex. 5, 7

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Van Eaton, Josh (ENRD) [mailto:Josh.Van.Eaton@usdoj.gov]
Sent: Tuesday, September 15, 2015 6:27 PM
To: Kaul, Meetu
Cc: Engel, Bethany (ENRD)
Subject: VW- Draft meeting agenda

PRIVILEGED ATTORNEY-CLIENT COMMUNICATION

ATTORNEY WORK PRODUCT

Meetu-

Draft agenda attached, as discussed. Please correct any errors and/or fill in any necessary information that is currently missing. Hoping to send this to Ben for review by midday tomorrow.

Thanks much,

JVE

Joshua H. Van Eaton

Trial Attorney

U.S. Department of Justice

Environment and Natural Resources Division

Environmental Enforcement Section

P.O. Box 7611

Washington, DC 20044-7611

p:202.514-5474

f: 202.514-0097

josh.van.eaton@usdoj.gov

Overnight:

601 D. Street, N.W. (Rm. 6423)

Washington, DC 20004

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To: Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]
From: Kaul, Meetu
Sent: Tue 9/15/2015 10:49:45 PM
Subject: RE: VW- Draft meeting agenda

Thanks, Josh. I've circulated here.

Ex. 5, 7

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Van Eaton, Josh (ENRD) [mailto:Josh.Van.Eaton@usdoj.gov]
Sent: Tuesday, September 15, 2015 6:27 PM
To: Kaul, Meetu
Cc: Engel, Bethany (ENRD)
Subject: VW- Draft meeting agenda

PRIVILEGED ATTORNEY-CLIENT COMMUNICATION

ATTORNEY WORK PRODUCT

Meetu-

Draft agenda attached, as discussed. Please correct any errors and/or fill in any necessary information that is currently missing. Hoping to send this to Ben for review by midday tomorrow.

Thanks much,

JVE

Joshua H. Van Eaton

Trial Attorney

U.S. Department of Justice

Environment and Natural Resources Division

Environmental Enforcement Section

P.O. Box 7611

Washington, DC 20044-7611

p:202.514-5474

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josh.van.eaton@usdoj.gov

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Washington, DC 20004

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Werner, Jacqueline
Sent: Tue 9/15/2015 10:56:08 PM
Subject: FW: VW Q+As.docx
VW Q+As.docx

FYI. Thanks, jj

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

From: Alexander, David
Sent: Tuesday, September 15, 2015 6:06 PM
To: Brooks, Phillip; Werner, Jacqueline; Belser, Evan
Cc: Orehowsky, Gregory
Subject: VW Q+As.docx

Attached please find a pretty good, but quick, fill-in of "As" to the provided "Qs" on VW (except a few which must be answered by others, mostly OTAQ.) Please let me know how else I can help.

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

To: Alexander, David[Alexander.David@epa.gov]
Cc: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Brooks, Phillip
Sent: Tue 9/15/2015 11:33:23 PM
Subject: Re: VW Q+As.docx

David

Thanks for jumping on this. Feel free to think of other questions you think might be asked and take a stab at answers. Better to have too many and cut back then to not think of an important question.

Sent from my iPhone

On Sep 15, 2015, at 6:06 PM, Alexander, David <Alexander.David@epa.gov> wrote:

> Attached please find a pretty good, but quick, fill-in of "As" to the provided "Qs" on VW (except a few which must be answered by others, mostly OTAQ.) Please let me know how else I can help.
>
> David
>
> David E. Alexander, Attorney
>
> WJC South Room 1111-B
>
> OECA/Air Enforcement Division (2242-A)
>
> (202) 564-2109
>
> <VW Q+As.docx>

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Bunker, Byron
Sent: Tue 9/15/2015 11:55:29 PM
Subject: Re: VW Update

Will do. Just got home. Should have it to you before 10.

Thanks,

Byron

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Cell Phone (734) 353-9623

Sent from my cell phone.

On Sep 15, 2015, at 6:47 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

> Byron
> We are meeting at 9:15 tomorrow with Janet Avi Cynthia and Phil. Can you send me a brief report on the status of the To Do list items. I think we need to go in to mtg with clear proposal for Friday announcement and what is left to be done in the way of prep.
>
> Pls send me whatever you have in hand tonight in the way of roll out materials
>
> Ben you should attend given that I am getting on a plane at 1
>
> If we go FRIDAY my plan would be to return to DC Thursday night
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Industry Information from SAE International
Sent: Wed 9/16/2015 12:07:42 AM
Subject: Join us - SAE V2V/V2I Cooperative Mobility Panel session at ITS World Congress

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SAE International Cooperative Mobility Panel Session
October 8, 2015
ITS WORLD CONGRESS,
Bordeaux, France

SAE Panel Session at 2015 ITS World Congress

Topic: Cooperative Mobility - when the standards meet the road
Panel: Vehicle to Vehicle/Infrastructure Plenary

SAE International will organize an expert panel discussion at the 2015 World Congress on Intelligent Transport System (ITS Congress) in Bordeaux, France. Through the main theme "Towards Intelligent Mobility – Better Use of Space", the ITS Congress will focus not only on how achieving intelligent mobility will change our lives but also on the benefits space can bring to ITS applications.

The session audience will learn about standards development, automotive design, testing, and rulemaking stages from a US perspective and highlighting SAE standards.

Topics to be covered at the panel session organized by SAE International:

- The need of standards in regulations
- Necessity for cooperative vehicle and road interaction in the context of connectivity/automated technology
- The need for testing as the driver for a more robust and reliable vehicle and road design

Moderator: Jack Pokrzywa, Director, Global Ground Vehicle Standards, SAE International

Panelists:

- King Gee, Director of Engineering and Technical Services, AASHTO
- Peter Sweatman, Director, Mobility Transformation Center
- Barb Wendling, VW, SAE International Task Force Chair for Automated Levels
- Jim Misener, Qualcomm, Chair of SAE International Dedicated Short Range Communications (DSRC) Committee

Registration and access:

The SAE panel session is open to the ITS Congress participants with an "Access to Congress sessions and Exhibition" or an "Access to Exhibition only" registration. The session will be located in the commercial theatre 2 in the exhibition area.

Register Here to attend this session.

SAE International is a global association committed to being the ultimate knowledge source for the engineering profession. By uniting over 137,000 engineers and technical experts, we drive knowledge and expertise across a broad spectrum of industries. We act on two priorities: encouraging a lifetime of learning for mobility engineering professionals and setting the standards for industry engineering. We strive for a better world through the work of our philanthropic SAE Foundation, including programs like A World in Motion® and the Collegiate Design Series™.

CHECK OUT SAE'S BLOG

See how the various mobility sectors address their current engineering challenges. Visit alwaysinmotion.sae.org. While there, download the SAE MOBILITY INDUSTRY STUDY ON CONNECTIVITY at:
alwaysinmotion.sae.org/2015/06/06/a-roadmap-for-mobility-connectivity/

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To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7 @ARB
Sent: Wed 9/16/2015 12:23:09 AM
Subject: RE: Time to talk for a minute?

Almost done a meeting.

Ex. 7

Ex. 7

California Air Resources Board

Ex. 7

Ex. 7 @arb.ca.gov

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Tuesday, September 15, 2015 5:03 PM
To Ex. 7 @ARB
Subject: Time to talk for a minute?

Hi Ex. 7

If you have a second to catch up on VW, would you mind calling my home number? **Ex. 6**
Ex. 6

Thanks,

Byron

Byron Bunker

US EPA

NVFEL Office Phone (734) 214-4155

DC Office Phone (202) 343-9283

Cell Phone (734) 353-9623

Sent from my cell phone.

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Bunker, Byron[bunker.byron@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Birgfeld, Erin
Sent: Wed 9/16/2015 12:44:19 AM
Subject: Re: Do we have a draft PR for VW ?

Logging on now. Will send what shared with Millett this afternoon in a few.

Sent from my iPhone

> On Sep 15, 2015, at 8:21 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
>
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Ex. 7 @vw.com]
From: Grundler, Christopher
Sent: Wed 9/16/2015 2:04:49 AM
Subject: Tried to reach you

Left you a vmail

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Bunker, Byron[bunker.byron@epa.gov]
From: Brooks, Phillip
Sent: Wed 9/16/2015 2:32:40 AM
Subject: Re: OK if this goes to Janet & Cynthia this evening?

I think I told her that. It's all starting to run together now. Feel free to share this with her

Sent from my iPhone

On Sep 15, 2015, at 9:39 PM, Bunker, Byron <bunker.byron@epa.gov> wrote:

> Hi Phil,
>
> Please see attached. Are you OK if this goes to Janet & Cynthia this evening? Did you give Cynthia a heads up that we might not be able to issue the COC this week?
>
> Thanks,
>
> Byron
>
> **********
>
> Byron Bunker
>
> Director Compliance Division
>
> Office of Transportation and Air Quality
>
> Environmental Protection Agency
>
> 2000 Traverwood Drive
>
> Ann Arbor, MI 48105
>
> Bunker.Byron@epa.gov
>
> Phone: (734) 214-4155

Mobile: (734) 353-9623

****

<VW Diesel To Do List 9-15-2015.docx>

To: Alexander, David[Alexander.David@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/16/2015 2:44:37 AM
Subject: RE: VW Q+As.docx

Thanks, David. No worries.

Ex. 5, 7

Otherwise on a quick skim all looks good!

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Alexander, David
Sent: Tuesday, September 15, 2015 8:50 PM
To: Kaul, Meetu
Subject: Fw: VW Q+As.docx

Meetu,

JRW asked me to fast-draft answers to a bunch of VW Qs and it just occurs to me that I didn't copy you. What I sent is now attached, typos and all.

So sorry about the inadvertence. It was sent to JRW, Phil, Evan and to Greg who answered one of my questions.

David

David Alexander, Attorney

Air Enforcement Division

United States Environmental Protection Agency

1200 Pennsylvania Ave. NW, Rm. WJC South 1111-B

Washington, DC 20044

telephone (202) 564-2109

From: Alexander, David
Sent: Tuesday, September 15, 2015 6:06 PM
To: Brooks, Phillip; Jacqueline Werner; Belser, Evan
Cc: Gregory Orehowsky
Subject: VW Q+As.docx

Attached please find a pretty good, but quick, fill-in of "As" to the provided "Qs" on VW (except a few which must be answered by others, mostly OTAQ.) Please let me know how else I can help.

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/16/2015 3:58:11 AM
Subject: VW

Ex. 5, 7

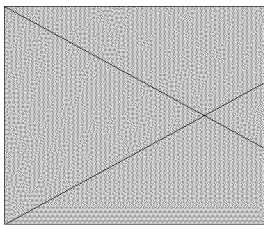
Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: WardsAuto OEM Edition
Sent: Wed 9/16/2015 8:06:02 AM
Subject: Mapping the User Experience

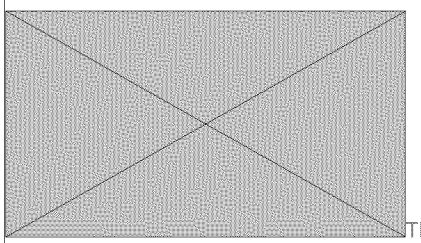
View Web Version | Add to Safe Sender List

WardsAuto OEM Edition



September 16, 2015

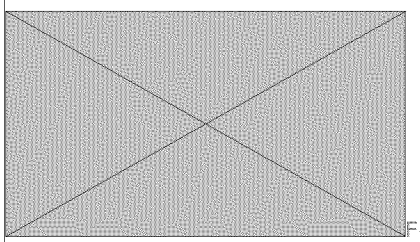
Krafcik Departs TrueCar for Google



The tech giant wants to get an autonomous vehicle in the market by 2020. It has put 1 million miles on prototypes, built by Roush in Livonia, MI, on California public roads with varying results.

FULL ARTICLE

Ford Finds 'Tough Love' Engaging



Football drew the biggest share of automotive ad dollars last week, with college football the most popular target at more than $22 million.

FULL ARTICLE

UAW Could Throw Cold Water on Automakers' Hot Output

"A long strike is highly unlikely, but I think some kind of short strike is possible," labor-relations professor and UAW observer Harley Shaiken says.

FULL ARTICLE

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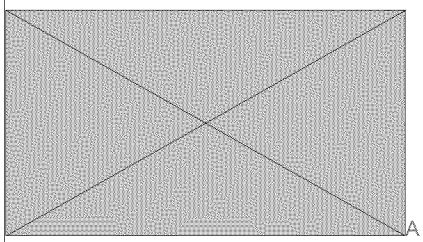
Design Cube from Proto Labs
Our Design Cube illustrates important considerations when designing plastic injection molded parts. It showcases a range of available surface finishes and examples of bosses, gussets, and ribs. It also demonstrates the impact on part quality of overly thick or thin sections, as well as ways to incorporate holes and their potential effect on resin flow. Register today and get yours free!

New Prius Sees 10% Fuel Economy Improvement

 A rating of 55 mpg gives the Prius best-in-class fuel economy among vehicles without a plug, Toyota says.

FULL ARTICLE

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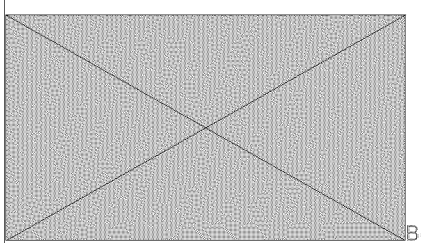
Steel solutions to lose weight
Tested safety and durability. Improved fuel economy. Lower CO_2 emissions. The drivers of tomorrow will expect more, and ArcelorMittal will deliver—with lightweight steel solutions. No other material can do what today's steel is doing for tomorrow's cars. Discover tomorrow's steel at auto.arcelormittal.com/NA.

Toyota Looks to Grow Prius Sales, Customer Base

Toyota sold 181,221 liftbacks, the original Prius body style, in 2007 in the U.S., but last year liftback and V wagon deliveries combined totaled 166,802.

FULL ARTICLE

Bentley Seeks New Terrain With Bentayga

 Bentley's new SUV carries over some of the 2012 concept's themes, namely the prominent haunches and steeply raked backlight. But there the similarities end.

FULL ARTICLE

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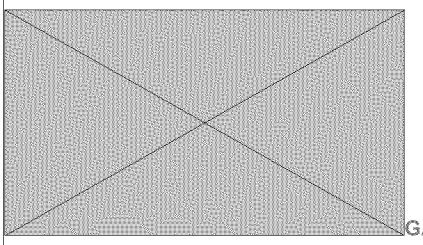
'17 Bentley Bentayga

 GALLERY

Bentley takes the luxury SUV segment to an upscale realm never before experienced. The brand is betting its customers will enjoy rugged, new experiences as well in the all-new Bentayga.

Some Leafs See 23-Mile Range Increase

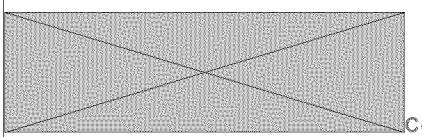
The change is effective with '16-model SV and SL grades, and is due to a new 30-kWh lithium-ion battery pack.

FULL ARTICLE

Advertisement

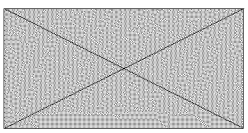
100 years of moving a world in motion
Since its foundation in 1915, ZF has evolved into a global leader in driveline and chassis technology. Our mission is to deliver efficient mobility – for the benefit of business, people and the environment. Find out how we set mobility in motion

2015 Frankfurt Auto Show

 Complete coverage of the 2015 International Motor Show in Frankfurt, Germany.

FULL ARTICLE

Advertisement



Join us Sept. 16 in Southfield, MI to see our analysts discuss industry trends and forecast the industry's performance in the months and years ahead. Hear the latest insights on topics most vital to your business. REGISTER NOW!

Rolls-Royce Pulls Cover Off Dawn

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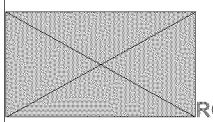
Drophead

Frankfurt International Auto Show
The hand-built car will cost $325,000, a conservative estimate from the company since most customers will add thousands of dollars of bespoke options.

FULL ARTICLE

Mapping the User Experience

 ROAD AHEAD BLOG
Millions of consumers have formed a special bond with Apple's user interface. Automakers want to emulate this kind of user experience, known as UX in tech circles, to create loyalty to a vehicle brand, not just a smartphone.

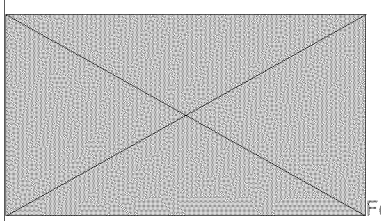
FULL ARTICLE

Deaths Attest to India's Weak Car-Safety Standards

Indians are responding to the grim statistics. A recent survey indicates the share of car buyers who include safety in their purchasing criteria is 74%, up from 42% in 2013.

FULL ARTICLE

Autoline Daily

 Ford Teams with Alcoa, New VW Tiguan Gets Bigger, Porsche Unveils EV.

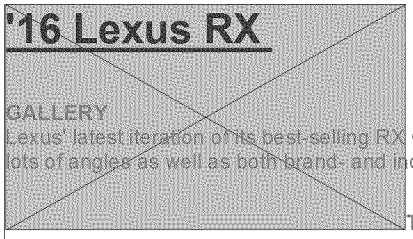
U.S. Big Trucks Enjoy Best August Since 2006

Deliveries of medium- and heavy-duty trucks hit 39,376 during the month, compared with 35,264 in the prior year, with all weight classes enjoying year-over-year increases.

FULL ARTICLE

Lexus RX: Still Familiar, But With Bit More Spice

'16 Lexus RX



GALLERY
Lexus' latest iteration of its best-selling RX CUV has a flashier exterior and interior, with lots of angles as well as both brand- and industry-first materials.

Test Drive
If the '16 RX were a Thai dish we'd dub its level of heat "mild-plus," with aggressive new sheet metal balanced out by light updates to its sport quotient.

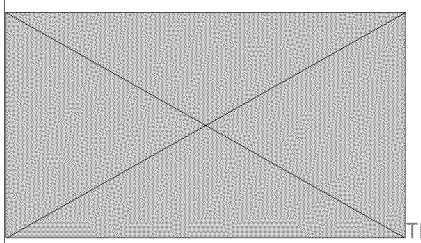
FULL ARTICLE

Rubber-From-Dandelion Research Gets Rolling Again

The joint project by Sumitomo and Kultevat represents the latest attempt to manufacture rubber derived from dandelions.

FULL ARTICLE

Cadillac XT5 Breaks Out



The '17 XT5 will replace the SRX, the best-selling vehicle for the General Motors luxury division.

FULL ARTICLE

WardsAuto Interview: Ford's Jonathan Crocker

During a Canadian stop on the "Ford Explorer Platinum Adventure Tour," vehicle engineering manager Jonathan Crocker points out features of the SUV's new top-trim level.

FULL ARTICLE

Ford Kicks Up Explorer's Trim Level

Advertisement

"Platinum takes it up a notch," says Matt Zuehlk,

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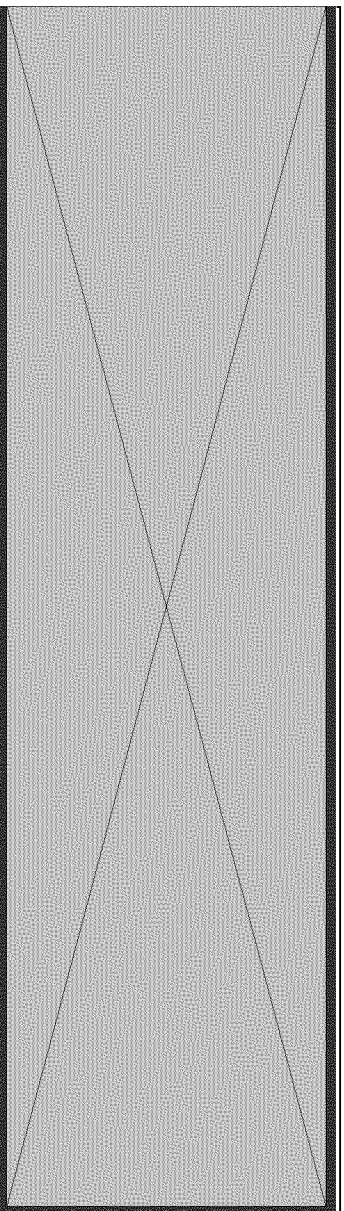
Explorer brand manager



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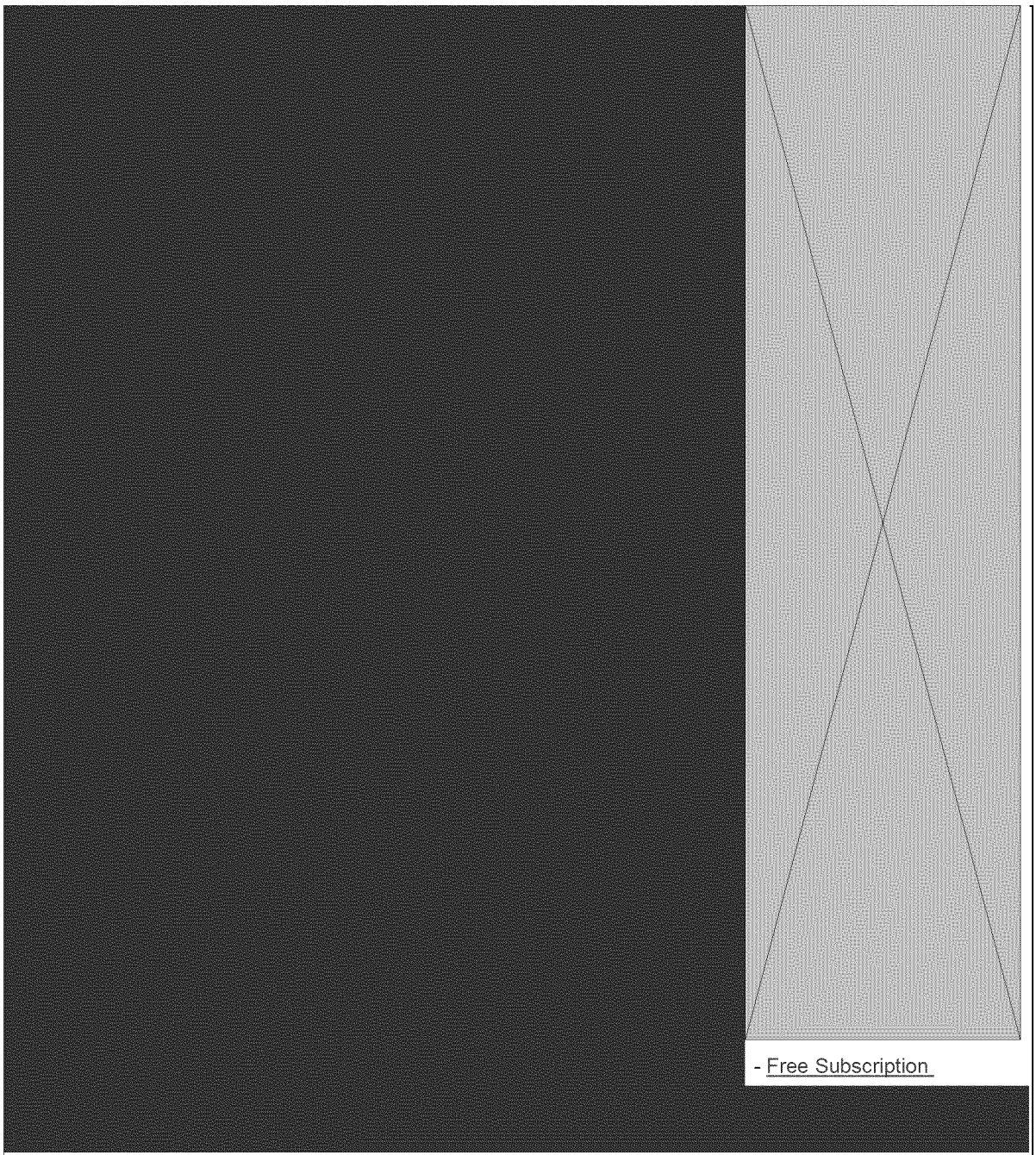

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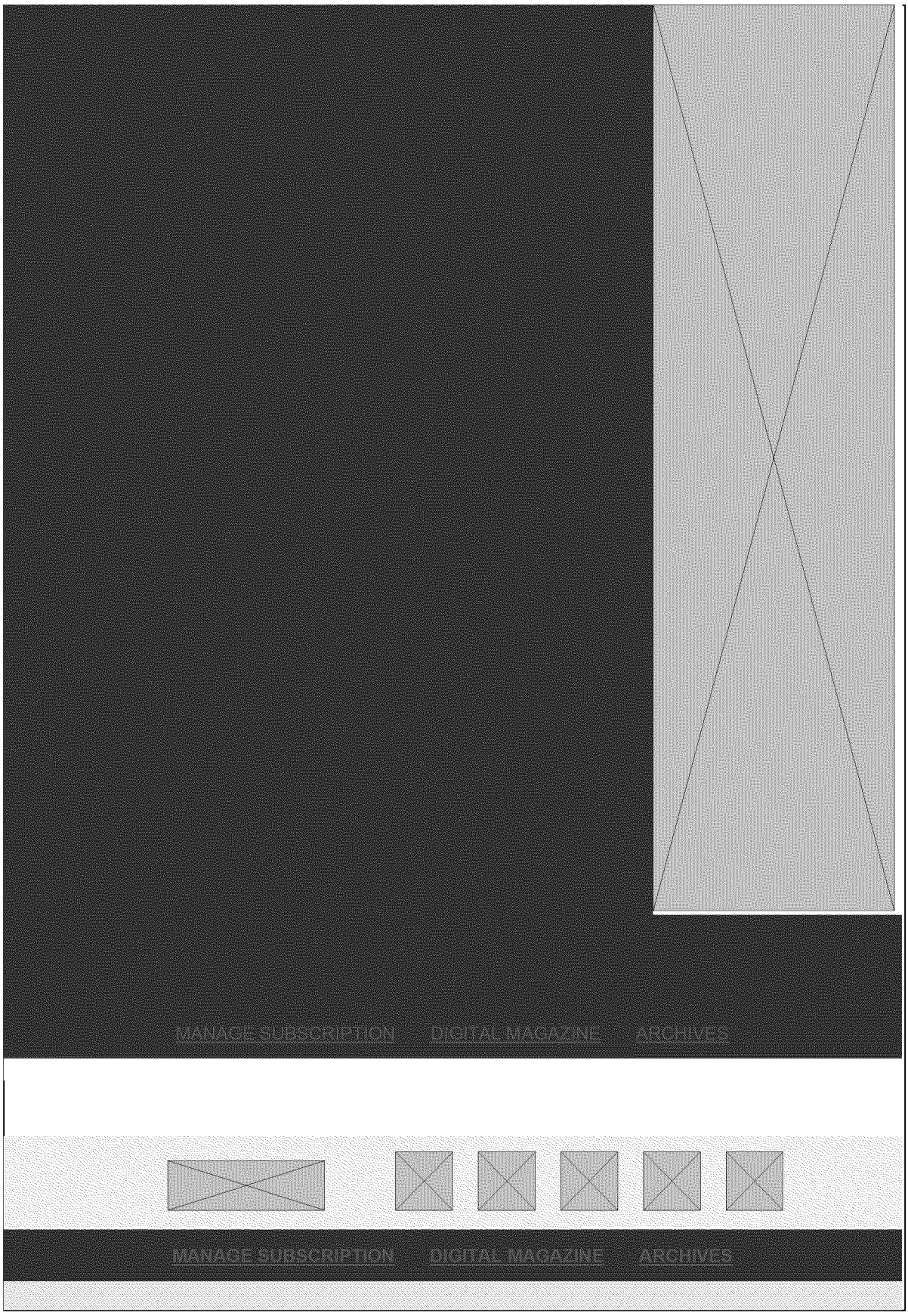
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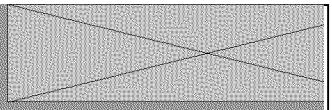

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. .

To: Danzeisen, Karen[Danzeisen.Karen@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]; Vincent E Coleman[vcoleman2@csc.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Wed 9/16/2015 11:38:42 AM
Subject: RE: Volkswagen PHEV S Ex. 4 - CBI

It worked!!!!

Thanks for the help everyone.

@Jim – Can you follow up with Ben to see if next week is still possible for the testing. Our test vehicle arrived yesterday.

Regards,

Bill Rodgers

Emissions Certification Engineer

Volkswagen Group

3800 Hamlin Rd

Auburn Hills, MI 48326

p. (248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 5:12 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim

Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Hi Bill,

Vince Coleman at the Verify Help Desk has been following your progress on this and let me know a little while ago that you attempted to submit your Supplemental Info but got an error. It looks like you removed the test details (e.g. fan placements, shift schedule ID, etc…) for Test Ex. 4 - CBI I think if you add those two rows back into the submission it should work.

The standards look like they were acceptable as entered.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 10:01 AM
To: Danzeisen, Karen
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Thanks Karen.

I have successfully submitted a Decision Information revision without Ex. 4 - CBI

@Jim – Once Ex. 4 - CBI are removed from the confirmatory test I can resubmit Ex. 4 - CBI Of course it's understood that the Ex. 4 - CBI test will be run anyway.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 9:26 AM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Hello Bill,

Thank you for these examples illustrating what's going on. The reason you get an abnormal error when you don't submit those Ex. 4 - CBI s because Verify is accepting whatever standards you are entering and then moving on to compile the necessary data to send to our Lab for scheduling. It's at this point that it reaches back to your Decision Info (DI) and grabs the "paired data" from the Test Number section of DI. The system is not designed to handle tests with multiple bag/phase data and that's where the crash occurs.

So, I think the next step is to attempt a Decision Information correction submission where you would remove your manufacturer test numbers for Ex. 4 - CBI . It's possible we may run into some problem because Jim has selected confirmatory tests already, but I think it's worth a try rather than scraping everything right off the bat. If it does work, then the next step would be to proceed to your Ex. 4 - CBI and

resubmitting that.

Let me know how it goes.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 8:22 AM
To: Danzeisen, Karen; Snyder, Jim
Cc: Giles, Michael (EEO)
Subject: Volkswagen PHEV Ex. 4 - CBI
Importance: High

Hello Karen and Jim,

I have attached the Supplemental Information (SI) and rejection submission report which include all test types required by the confirmatory test decision Ex. 4 - CBI

Additionally as indicated below we only get a Verify processing error when attempting to submit the SI with Ex. 4 - CBI emission names other than those emissions names listed in the attached rejection submission report.

Please assist in resolving this matter today to avoid test scheduling problems.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/15/2015 7:44:33 AM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Tue Sep 15 07:44:21 EDT 2015 while processing document: Ex. 4 - CBI

Vehicle ID: A Ex. 4 - CBI

Vehicle Configuration #: 0

Transaction Identifier: Ex. 4 - CBI

To: Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
From: McCabe, Janet
Sent: Wed 9/16/2015 12:27:32 PM
Subject: RE: VW Briefing Materials for 9:15 Wednesday

I agree it would be much better to have you hear for d-day

-----Original Message-----
From: Giles-AA, Cynthia
Sent: Wednesday, September 16, 2015 7:55 AM
To: McCabe, Janet
Cc: Grundler, Christopher; Garbow, Avi
Subject: RE: VW Briefing Materials for 9:15 Wednesday

If keep flights as is, would have to be at DCA by about 11 am Friday. I can look if changing flights is even possible. It is a 24 travel plan starting noon Friday, with 3 legs, so will take me a little time to figure out if changing is an option.

Larry will be standing in while I am away. For this announcement, would I think be good if I could do it if that's possible.

-----Original Message-----
From: McCabe, Janet
Sent: Wednesday, September 16, 2015 7:52 AM
To: Giles-AA, Cynthia
Cc: Grundler, Christopher; Garbow, Avi
Subject: Re: VW Briefing Materials for 9:15 Wednesday

I'm in RTP Thursday, but could join announcement calls via phone (and connect by video to HQ).

Is Friday morning out for you? Would/will Larry stand in for you while you're away?

Sent from my iPhone

> On Sep 16, 2015, at 7:49 AM, Giles-AA, Cynthia <Giles-AA.Cynthia@epa.gov> wrote:
>
> FYI I am traveling on Friday, plane taking off noon. This is international trip, so very difficult to change it. So if doing this Thursday is an option, would be much easier for me. Just flagging this so people are aware.
>

To: Rodgers, William (EEO)[William.Rodgers@vw.com]; Danzeisen, Karen[Danzeisen.Karen@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Vincent E Coleman[vcoleman2@csc.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Wed 9/16/2015 12:34:37 PM
Subject: RE: Volkswagen **Ex. 4 - CBI**

Ben confirmed that he received it. He wouldn't say when it will run but didn't immediately dismiss the possibility of next week.

-Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, September 16, 2015 7:39 AM
To: Danzeisen, Karen
Cc: Giles, Michael (EEO); Snyder, Jim; Vincent E Coleman; Allen, Gregory (EEO)
Subject: RE: Volkswagen **Ex. 4 - CBI**

It worked!!!!

Thanks for the help everyone.

@Jim – Can you follow up with Ben to see if next week is still possible for the testing. Our test vehicle arrived yesterday.

Regards,

Bill Rodgers

Emissions Certification Engineer

Volkswagen Group

3800 Hamlin Rd

Auburn Hills, MI 48326

p. (248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 5:12 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen Ex. 4 - CBI

Hi Bill,

Vince Coleman at the Verify Help Desk has been following your progress on this and let me know a little while ago that you attempted to submit your Ex. 4 - CBI but got an error. It looks like you removed the test details Ex. 4 - CBI for Test Ex. 4 - CBI

Ex. 4 - CBI

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov

(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 10:01 AM
To: Danzeisen, Karen
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen Ex. 4 - CBI

Thanks Karen.

I have successfully submitted a Ex. 4 - CBI

@Jim – Ex. 4 - CBI Of course it's understood that the Ex. 4 - CBI

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 9:26 AM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen Ex. 4 - CBI

Hello Bill,

Thank you for these examples illustrating what's going on. The reason you get an Ex. 4 - CBI Ex. 4 - CBI whatever standards you are entering and then moving on to compile the necessary data to send to our Lab for scheduling. It's at this point that it reaches back to Ex. 4 - CBI grabs the 'Ex. 4 - CBI The system is not designed to handle tests with Ex. 4 - CBI and that's where the crash occurs.

So, I think the next step is to attempt a Ex. 4 - CBI where you would Ex. 4 - CBI It's possible we may run into some problem because Jim has selected d Ex. 4 - CBI tests already, but I think it's worth a try rather than scraping everything right off the bat. If it does work, then the next step would be to proceed to your Ex. 4 - CBI and resubmitting that.

Let me know how it goes.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 8:22 AM
To: Danzeisen, Karen; Snyder, Jim
Cc: Giles, Michael (EEO)
Subject: Volkswagen Ex. 4 - CBI
Importance: High

Hello Karen and Jim,

I have attached the Ex. 4 - CBI report which include all test types required by the Ex. 4 - CBI

Additionally as indicated below we only get a Verify processing error when attempting to submit

Ex. 4 - CBI

Please assist in resolving this matter today to avoid test scheduling problems.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/15/2015 7:44:33 AM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the

Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Tue Sep 15 07:44:21 EDT 2015 while processing document:

Ex. 4 - CBI

Vehicle ID: Ex. 4 - CBI

Vehicle Configuration #: 0

Transaction Identifier: **Ex. 4 - CBI**

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Wed 9/16/2015 12:35:03 PM
Subject: Automatic reply: Volkswagen PHEV Ex. 4 - CBI

Hello,

I will be out of the office Ex. 6 I will be returning to the office on Friday, September 18th.

I will have access to e-mails during this time, but please expect a delay in my response

Thank You and Best Regards,

Greg Allen

VWGoA EEO

To: 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.org]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; 'Buller, Patrick'[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; 'david.woods@chrysler.com'[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; 'Jenny.Sigelko@vw.com'[Jenny.Sigelko@vw.com]; 'JNIKEUS@volvocars.com'[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; 'Suanne.Thomas@vw.com'[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; 'Vineet Mehta'[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]; Zhu, Jennifer (J.)[jzhu38@ford.com]
Cc: Nikeus, Jill (J.N.)[jill.nikeus@volvocars.com]; Frank Bohanan[fbohanan@mazdausa.com]; Tommy_Chang@ahm.honda.com[Tommy_Chang@ahm.honda.com]
From: Glodich, Jeffrey (J.M.)
Sent: Wed 9/16/2015 12:46:23 PM
Subject: RE: SAE J1634 LDVP Committee Meeting

All,

Just a reminder that this is the last meeting before we bring J1634 to ballot, so please be prepared to discuss any comments/concerns.

Thanks,
Jeff

-----Original Appointment-----
From: Glodich, Jeffrey (J.M.)
Sent: Monday, August 31, 2015 8:41 AM
To: Glodich, Jeffrey (J.M.); 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; Beth Perry <eperry@sae.org>; 'Bob Maxwell'; brian.mace@horiba.com; 'Buller, Patrick'; 'Carl Paulina'; Chris Nevers; Christopher J Twarog ; 'david.woods@chrysler.com'; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; guanghui.cai@gm.com; 'Jeff Foor'; 'Jenny.Sigelko@vw.com'; 'JNIKEUS@volvocars.com'; 'Keith Thompson'; kyle.bedsole@gm.com; 'Mahmoud Yassine'; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z.

Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)'; sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com; 'Suanne.Thomas@vw.com'; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; 'Vineet Mehta'; William Beggs <william.beggs@gm.com>; 'William Ott'; william.meschievitz@tema.toyota.com; Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.); Zhu, Jennifer (J.)
Cc: Nikeus, Jill (J.N.); Frank Bohanan; Tommy_Chang@ahm.honda.com
Subject: SAE J1634 LDVP Committee Meeting
When: Thursday, September 17, 2015 1:00 PM-3:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Toyota, Ann Arbor

Purpose: Agree on final updates before 1st level balloting.

SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.

Non-Responsive

Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>

Non-Responsive

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7 (EEO)
Sent: Wed 9/16/2015 12:48:29 PM
Subject: Test Status

Hello Byron,

Got you voice mail. Still waiting for a response from Germany. I pinged them again this morning for a status. I'll let you know as soon as I hear…

To: Belser, Evan[Belser.Evan@epa.gov]
From: Pickell, Casey
Sent: Wed 9/16/2015 12:53:25 PM
Subject: RE: Guardian Article TODAY re In-Use Noncomplinace Among European Diesels
Dont_Breathe_Here_report_FINAL.pdf
ICCT_NOx-control-tech_EUWhitePaper_09032015.pdf
AQN_only-10-of-new-diesel-.pdf

Another article and two European studies similar to the WVU study attached if you think others might want them.

Ex. 5

Thanks,

Casey

From: Belser, Evan
Sent: Tuesday, September 15, 2015 11:22 AM
To: Pickell, Casey
Subject: FW: Guardian Article TODAY re In-Use Noncomplinace Among European Diesels
Importance: High

From: Belser, Evan

Sent: Tuesday, September 15, 2015 11:19 AM
To: Bunker, Byron; Brooks, Phillip; Wehrly, Linc; Werner, Jacqueline; Kaul, Meetu; Orehowsky, Gregory; Shinkman, Susan; Kelley, Rosemarie; Senn, John
Subject: Guardian Article TODAY re In-Use Noncomplinace Among European Diesels
Importance: High

http://www.theguardian.com/environment/2015/sep/14/nine-out-of-10-new-diesel-cars-in-breach-of-eu-pollution-rules-report-finds

Nine out of 10 new diesel cars exceed EU pollution limits, report finds

Nine out of 10 new diesel cars break new EU pollution limits when tested on roads rather than test tracks, according to a new report.

On average, the cars emit seven times the permitted level of NOx gasses, with the worst car producing 22 times the legal limit. Models from every major motor manufacturer breached the limit when they were evaluated in real-world conditions.

From 1 September, new diesel cars in the EU have had to comply with emissions rules called "Euro 6". However, carmakers can use a whole range of techniques to ensure that their cars perform far better under test conditions than when driven by ordinary drivers.

These include stripping components from the car to reduce weight, using special lubricants, over-inflating tyres and using super-smooth test tracks. The same techniques are used to boost the apparent fuel efficiency of vehicles.

The report, from sustainable transport group Transport & Environment (T&E), compiled recent data to show that when diesel vehicles are tested in normal driving conditions they emit much greater levels of NOx gases. NOx gases and other vehicle-related pollution are estimated to cause half a million premature deaths each year in the EU.

The T&E report also found that motor manufacturers often sell less polluting models of the same cars in the US, where emissions rules are stricter. This is achieved by including devices that capture pollution and cost a few hundred euros.

"Every new diesel car should now be clean but just one in 10 actually is," said Greg Archer, T&E's clean vehicles manager. "This is the main cause of the air pollution crisis affecting cities. Carmakers sell clean diesels in the US, and testing should require manufacturers to sell them in Europe too."

In April, the UK's supreme court ordered the government to tackle the UK's air pollution, which has been in breach of EU limits for years. Proposals from ministers released on Saturday include improving public transport and creating low-emission zones in a number of cities, perhaps following the lead of central London where most diesel drivers will have to pay a £12.50 pollution charge from 2020.

There are plans to introduce a new on-road test that will measure the real-world emissions of diesel cars, but it will not apply to all new EU cars until 2018 at the earliest. Carmakers have argued that on-road testing should be delayed until 2020.

"We cannot choose where we breathe so we must stop cars polluting our city air," concludes the T&E report. "The technology to clean up vehicle exhausts is available and costs a few hundred euros. It is a small price compared to the nearly €1tn spent annually in health care and lost output and productivity. Cars with engines must be stopped from polluting our air or prevented from accessing our cities."

Evan Belser

Chief, Mobile Source Enforcement Branch, Air Enforcement Division

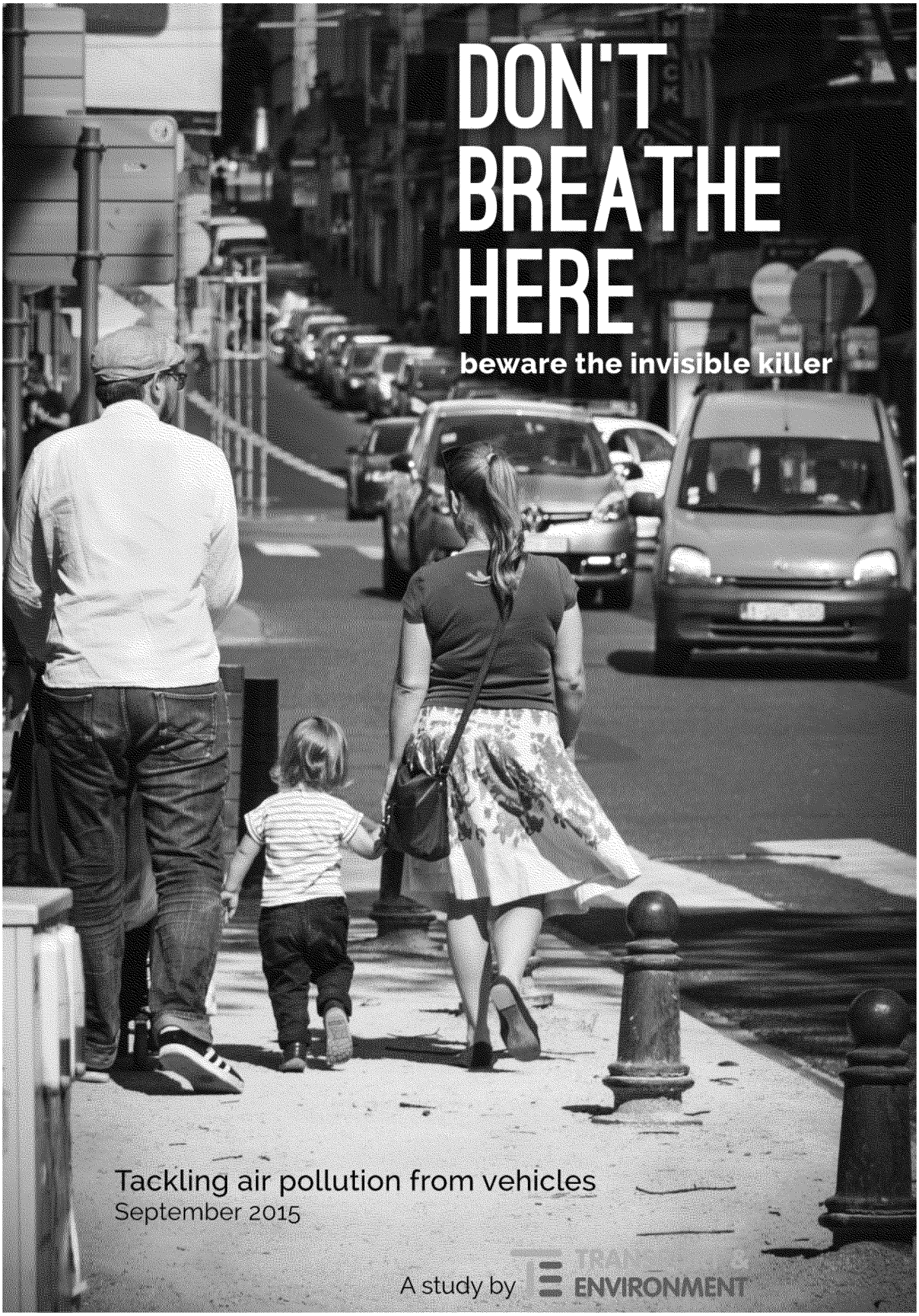
National Coordinator for Administrative Litigation, Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

202-564-6850

Do not release this email. This is confidential attorney-client communication and privileged attorney work product created for law enforcement purposes.


DON'T BREATHE HERE
beware the invisible killer
Tackling air pollution from vehicles
September 2015
A study by
ENVIRONMENT

In-house analysis by Transport & Environment
Published by Transport & Environment

For more information, contact:

François Cuenot
Policy Officer
Transport & Environment
francois@transportenvironment.org
Tel: +32(0)2 851 02 28 / +32(0)49 134 46 70

Acknowledgements

Responsibility for the content of the report is sol ely that of T&E. T&E wishes to thank Malcolm Fergus son, Iddo Riemersma and Stefan Hausberger who have provi ded technical reports that supported some of the analysis presented in this report.

VW FOIA, EPA 06/20/2017 2017-FFP_023492

Executive Summary

Urban air in much of Europe is not fit to breathe, and vehicles, especially diesel cars, are the principal cause. High levels of particles, nitrogen oxides and unburned fuel create a cocktail of harmful pollution that is breathed by almost every urban European citizen. The effects are half a million premature deaths each year; a quarter of a million hospital admissions; and 100 million lost working days cumulatively costing over €900 billion. The crisis is taking place despite extensive EU laws that limit ambient air-pollution levels, total national emissions, and emissions from major sources including vehicles. The Commission has acted against 18 EU member states for breaching pollution levels but progress to tackle the problem is glacial. EU limits for air pollution are projected to be breached for at least another 15 years and levels will remain above World Health Organisation no-effect guidelines.

Vehicles are the principal source of exposure because of their ubiquity and the proximity of the exhaust emissions to people. For example, vehicles produce 80% of the particulates and 46% of nitrogen oxides in London [1]. There has been some progress: lead has been removed from fuel; carbon monoxide levels have been reduced; and the introduction of Euro 6 limits on diesel cars is reducing primary particulate emissions. But nitrogen oxides (NOx) remain a key problem especially from diesel engines. These are converted in the air to toxic nitrogen dioxide and ultimately to secondary nitrate aerosol particles and to ozone (when combined with unburned fuel in the air). Particle emissions from older diesels and vehicles with damaged or illegally removed diesel particulate filters remain an issue. There are also problems with gasoline vehicles notably particles from gasoline direct injection vehicles.

The reason for the continuing high emissions from new cars is an ineffective system for testing vehicles that deliver impressive reductions of emissions in laboratory tests but fail to replicate this performance when driven on the road. This problem is extensive for diesel cars and vans that typically emit on average around five times more pollution than permissible limits when driven on the road. But gasoline cars are not exempt – one in five modern petrol cars reportedly fail to achieve emissions limits on the road. [2] Laboratory tests are unrepresentative because the current EU test cycle (New European Drive Cycle, NEDC) is too slow and has insufficient acceleration. The test procedure contains loopholes the manufacturers exploit to get low results. Emissions are only optimised for the tested conditions and there is substantial anecdotal evidence that cars detect when they are tested and deploy "cycle beating" techniques to reduce emissions.

Euro 6 regulations requiring cars to be tested under "normal driving conditions" were adopted in 2007 but the real-world driving emissions (RDE) tests in which portable emissions monitoring systems (PEMS) measure the actual pollution emitted from the exhaust have still not commenced. The test procedure has largely been finalised but there remain important omissions such as failing to account for higher emissions when the engine is cold or when the diesel particulate filter regenerates (cleans itself). Furthermore, agreement must still be reached on when and which 'not-to-exceed' limits (calculated using 'conformity factors') will apply. The test will also initially only apply to diesel NOx emissions yet these are not the only issue.

How long urban air pollution remains a health issue will largely be determined by how effective the new Euro 6 limits and RDE tests are. With full implementation by 2019, non-compliance with NO_2 limit values will be virtually eliminated by 2025. In contrast a later introduction of a weaker

[1] Mayor of London, 2010, Clearing the air: The Mayor's Air Quality Strategy
[2] Emissions Analytics 2015, August 2015; Air quality...it's hotting up

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limit (through high CFs) will lead to more than 10% of monitoring stations continuing to breach current limits in 2030.

There is no technical reason why limits could not be met quickly and urban air pollution rapidly improved. Technology to control emissions is available and affordable. To tackle primary particle emissions a diesel particulate filter (DPF) is now used and is effective – although there are concerns about the impacts of regeneration, especially in urban areas. A similar but simpler gasoline particulate filter could tackle the high particle emissions from gasoline direct injection engines – but because limits are not enforced in real-world tests carmakers haven't fitted them despite their low cost (around €50). Selective Catalytic Reduction (SCR) tackles the diesel NOx issues in combination with other after-treatment systems. But a majority of modern cars continue to use cheaper, ineffective systems to avoid the approximate €200-500 cost of the system. Even where carmakers fit SCR they often configure the system to be ineffective to avoid either needing a large storage reservoir or requiring the driver to refill between service internals. This is because the reagent used in SCR systems (urea) is consumed and requires replacement. By systematically under-dosing with urea, a small bottle of urea can last a year – but the emissions are unnecessarily high.

Cars are not the only issue; Non-Road Mobile Machinery (NRMM), ranging from portable machines like hedge trimmers to large off-road construction machines like bulldozers and engines for compressors, pumps and generators, emit around 15% of urban NOx and 5% of particles. The rules governing their emissions are less strict than for Euro VI trucks and currently omit particle numbers. Tests are often unrepresentative of different use patterns in this very varied sector. The European Commissions has proposed Stage V emissions regulations to address some of these issues and they contain many positive proposals. But the proposed limits fail to align NRMM emissions with those of Euro VI trucks or require the latest abatement technology. The regulation is not technology or sector-neutral with higher limits for gas engines; there are important omissions such as particulate controls on locomotives, smaller barges and large generators. The proposed reforms to testing are also too limited and should be extended to checking in-service emissions using PEMS systems.

The introduction of RDE tests is a key step in tackling vehicle emissions. But tackling the air pollution crisis quickly necessitates not-to-exceed limits to be introduced from 2017 and Euro 6 limits to fully apply two years later. The test must also address the full range of driving conditions and measure emissions from all regulated pollutants from diesels and gasoline vehicles. The emissions checks performed as part of type approval on pre-production cars must be validated by a greatly expanded programme of conformity checks to confirm vehicles sold to consumers also meet these limits and prevent carmakers optimising type approval tests. More in-service conformity checks to confirm pollution abatement equipment continues to operate effectively throughout its lifetime – as successfully undertaken in the US – are also needed and the data should be routinely published.

The Commission must also bring an end to the system in which carmakers select the bodies to test and check their compliance with limits and replace it with a truly independent European type approval authority. This could be funded by manufacturers paying a levy on each new car sold that would be used to finance independent testing. The system of checking that cars continue to meet acceptable pollution limits (Periodic Technical Inspections) is also out-dated, insufficient and in urgent need of improvement. This would ensure that SCR and particle filters function correctly throughout the life of the vehicle. In particular, PTI could be strengthened by setting an expiration date for the type approval certificate. This would ensure that older, more polluting vehicles get scrapped or used to a very limited extent beyond a given age. The Commission must also bring forward proposals for Euro 7/VII emissions limits to end the systems

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of different limits for diesel, gasoline and natural gas cars and to ensure WHO health guideline limits are met in heavily trafficked locations throughout Europe. Ambitious Euro 5 standards for motorcycles and scooters should equally be agreed to reduce emissions from this sector and promote use of electric two-wheelers.

This required future work programme of the Commission would address much of current crisis but member states must take complementary actions. Diesel taxes should be raised to be equivalent with those of gasoline on the basis of their energy content. This would begin to shift the market in favour of less polluting gasoline, hybrid and ultimately electric cars. CO_2–based vehicle taxes should also include an adjustment to account for higher diesel air pollution emissions. Incentives could also be introduced to encourage the supply of vehicles with emissions significantly below that of Euro 6. This includes supporting through tax schemes and infrastructure the market for electric vehicles that produce zero air pollution in cities. Funding should also be supplied for retrofit programmes to reduce the emissions of older heavy-duty vehicles and NRMMs. National governments should also support and encourage local measures to manage traffic or emissions in pollution hotspots such as: cleaning up municipal fleets; tackling emissions from buses and taxis; establishing pedestrian areas; placing restrictions on vehicular access for all or high-emitting vehicles through low emission zones; and establishing goods trans-shipment centres.

We cannot choose where we breathe so we must stop cars polluting our city air. The technology to clean up vehicle and machinery exhausts is available and costs a few hundred euros. It is a small price compared to the nearly €1 trillion spent annually in health care and lost output and productivity. Cars with engines must be stopped from polluting our air or prevented from accessing our cities. Citizens deserve the right to clean air wherever we need to breathe.

Recommendations for EU action

Euro 6:	Agree an ambitious RDE package that has strict not- to-exceed (NTE) limits for all pollutants, and which includes all engine operating conditions
NRMM:	Align emission limits and testing for non-road mobile machinery with the provisions in place for Euro VI for HDVs
Testing:	Introduce a system of random conformity of production checks and in-service testing overseen by an independent EU Type Approval Authority
Euro 7/VII:	Commission proposal for Euro 7/VII limits for cars, vans and trucks to align limits for diesel, gasoline and natural gas vehicles to enable WHO air pollution guidelines to be met
Motorcycles:	Agree Euro 5 standard for motorcycles and scooters and pro- mote electric two-wheelers within a wider EU strategy on electro-mobility
EU law:	Simplify EU infringement procedure to shorten the steps leading to penalties for non-compliant member states

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The continuing menace of air pollution and the role of transport

Human activities release a large number of different pollutants into the atmosphere, which harm human health and damage the environment. The consequences include: irritation of the skin, eyes, or other sensitive membranes; nuisance caused by noxious smells; acute and long-term toxic effects; and carcinogenicity. Vehicles with internal combustion engines are a dominant source of many of the air pollutants of greatest concern and are, together with construction equipment, the subjects of this report.

Pollution from vehicles is emitted close to where people live and therefore has a much greater impact on human health than more diffuse sources like agriculture or emissions from industry that are widely released high into the air from tall stacks Transport emissions thus lead to higher levels of exposures to the population, as transport activities occurs where people lives, unlike most of the other sources of pollution emissions.

Generally, the evidence of adverse health effects in those living or working close to major roads is growing steadily. However, it has proved difficult to disentangle the individual effects of the many different substances that make up the cocktail of traffic pollution.

Carbon dioxide (CO!), formed by the oxidation of the carbon in the fuel, does not affect human health in the normal concentrations found in ambient air, so it is not considered a pollutant for air quality purposes. It is however the most important greenhouse gas, and is relevant to some other aspects of this report, so it will be referred to again later.

1. Urban air pollution in Europe

1.1. Exceedances of EU air quality limit values

Air pollution in Europe continues to be significantly above the levels that the World Health Organization (WHO) considers to be a risk to human health. In its latest annual report on air quality [3], the European Environment Agency summarises the current position on exposure to major pollutants across Europe's urban populations as set out in Table 1 below.

!

Pollutant	Estimated % exposed above EU reference value	Estimated % exposed above WHO guide value
Particulates ($PM_{2.5}$)	10–14	91–93
Particulates (PM_{10})	21–30	64–83
Ozone (O_3)	14–17	95–98
Benzo(a)Pyrene	24–28	85–89
Nitrogen Dioxide	8–13	8–13
Sulphur Dioxide	<1	36–43
Carbon Monoxide	<2	<2
Lead	<1	<1
Benzene	<1	10–12

Notes: Pollutants are ordered in terms of their relative risk to health, with the highest first.
Estimates are for 2010-12, with adjustments for meterology, allowed exceedances, etc.

Table 1. Percentage of the urban population in the EU-28 exposed to air pollutant concentrations above EU and WHO reference levels

[3] European Environment Agency - http://www.eea.europa.eu/publications/air-quality-in-europe-2014

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According to the WHO guidelines, which indicate the level of pollution at which health effects occur, over 80% of the EU urban population is exposed to unacceptable levels of air pollution. However, only 20% lives in areas breaching EU air pollution limits. EU limit values for many pollutants are unacceptably high and should be lowered to align with WHO Guideline values.

For NO_2 – nitrogen dioxide; an important pollutant from traffic and a major precursor of ozone and particulate matter – around 10% of Europe's urban population is also exposed to above-safe levels designated by the WHO. In addition:

- On average, $PM_{2.5}$ rural and urban background concentrations remained at the same level from 2006 to 2012, while just a small decline was observed at traffic stations;
- There was a flat trend for O_3 concentrations between 2003 and 2012 in 80% of the monitoring stations, and while 18 % of the stations registered a decreasing trend, 2% registered an increase;
- The estimated decrease in NO_x emissions (30% between 2003 and 2012) is not reflected in the fall in measured NO_2 annual mean concentrations in ambient air (of around 18%) in the EU, and the EEA attributes this primarily to increased primary NO_2 emissions from diesel vehicles.

In contrast carbon monoxide and lead pollution from traffic have been largely resolved through changing fuel quality and use of exhaust after-treatment systems.

1.2. The health impacts of air pollution

The WHO recently estimated that across Europe, 500,000 premature deaths were attributable to air pollution in 2012 [4]. Heart disease and stroke were the most common causes, accounting for 80% of the cases, followed by lung diseases and lung cancer. In addition to causing such premature death, air pollution increases the incidence of a wide range of diseases (mainly respiratory, cardiovascular, and cancer-related) including those listed above, and leads to both long-term and acute health effects.

More detailed modelling by the European Environment Agency (EEA) for the EU-28 countries suggests around 430,000 premature deaths arise from PM2.5 concentrations alone. Germany, having the largest population of the EU-28 countries, has the highest estimate of premature deaths at over 69,000 per year. Italy and Poland (with almost 65,000 and 42,400 premature deaths per year, respectively) are next highest, owing in part to higher levels of exposure to PM2.5. More generally, exposure rates and mortality rates across central and eastern Europe both tend to be higher than the average rates. The most important pollutants from transport are summarised in Table 2 below, and pollutants of lesser concern are summarized in Annex 1.

[4] WHO, 2014, Burden of disease from Ambient Air Pollution for 2012 - Summary of results, World Health Organization, http://www.who.int/phe/health_topics/outdoorair/databases/AAP_BoD_results_March2014.pdf

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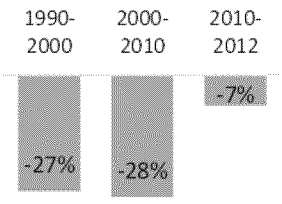
Nitrogen Oxides (NO_x)

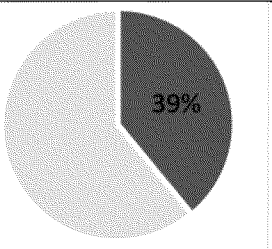
Change in Emissions



Sources: NO_x can be formed in any high-temperature combustion process, but it is primarily formed in vehicle engines and power plants. NO_x, comprising mainly nitric oxide or nitrogen monoxide (NO) and nitrogen dioxide (NO_2), is formed through the chemical combination of nitrogen and oxygen in the combustion process within a cylinder. For most sources, only a small proportion of emissions are primary NO_2, but for diesel engines NO_2 typically makes up most of the NO_x emitted.

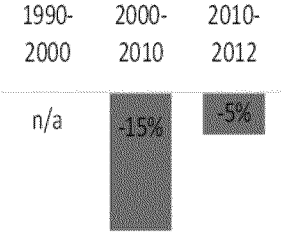
Health Impacts: NO is not a primary pollutant because it is not directly harmful to human health. However, it oxidises in the air to form NO_2, which is a primary pollutant. NO_x also contribute to the formation of secondary particulate matter (nitrate aerosol). Scientific evidence links short-term NO_2 exposures to adverse respiratory effects including airway inflammation in healthy people and increased respiratory symptoms in people with asthma or other pre-existing respiratory problems. Recent evidence show that NO_2 has an effect on mortality as big as PM2.5[5]. NO_x in the air also reacts with ammonia, moisture, and other compounds to form very small particles.

Transport Share in 2012



Particulate Matter (PM)

Change in Emissions



Sources: PM consists of particles suspended in the air. Sea salt, black carbon from combustion, dust, and condensed particles from certain chemicals can all be classified as PM. During internal combustion engine operation, the combination of unburnt carbon particles with condensed heavy fractions of hydrocarbons and sulphates originating from sulphur in the fuel give rise to particulate matter (PM) in vehicle exhaust. Black carbon particles are particularly associated with diesel engines, and these may have other harmful compounds adsorbed onto their surfaces. Wear on brake pads, clutches, and tyres also contribute to particulate emission and re-suspension.

The smallest particles are of greatest concern. They are measured as PM_{10} (diameter less than 10 micrometres), $PM_{2.5}$ (less than 2.5 micrometres), and UFP (Ultra Fine Particles, less than 0.1 micrometres).. Smaller particles are particularly affected by wind conditions and can travel hundreds of kilometres, but the highest concentrations of them are always found close to busy roads. Working on the background and street PM concentration reduction must be a coordinated effort between local, national, and transboundary emission sources.

[5] Faustini et al., 2014, Nitrogen dioxide and mortality: review and meta-analysis of long-term studies: http://www.ncbi.nlm.nih.gov/pubmed/24558178

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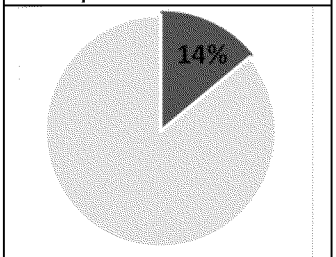
Health Impacts: Small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respirat ory diseases, such as emphysema and bronchitis, and can aggravate existing heart disease, leading to increased hospital admiss ions and even premature death. The PM component of air pollution is also most closely associated with increased incidence of canc er, especially lung cancer. Indeed, in 2012, the International Age ncy for Research on Cancer (IARC) reclassified diesel engin e exhaust as carcinogenic to humans. There is little evidence to suggest a safe threshold for particulates, and effects can be dete cted at little more than background concentrations, especially for $PM_{2.5}$.	Transport Share in 2012 

Source: EEA and WHO various documents

Table 2. Summary of key air pollutants

According to EEA estimates, ozone exposure causes p erhaps several tens of thousands of additional deaths across the EU-28. A further 8% or more of th e EU's urban population was exposed to an average annual NO_2 concentration above the limit value and WHO Guidel ine. Although this is likely to cause both cardiovascular and respiratory mortality and respir atory morbidity, the scale of these impacts has not been quantified by the WHO. Recent evidence suggest s that health impacts of NO_2 emissions could have been significantly underestimated. [6]

1.3. Regulation of air pollution in Europe

A complete framework of air pollution legislation i s now in place in Europe, but weak implementation a nd standards undermine its effectiveness.

- Regulating air pollution concentration levels: Air quality is measured via a network of air pollution concentration measuring stations around Europe and is subjected to air quality emission limits defined in the Ambient Air Quality Directive (AAQD) . However, enforcement of the limits is weak and siting of some monitoring stations is questiona ble in some instances. The limits which are applied are also significantly above the levels tha t cause health effects for many pollutants.
- Capping the emission: the National Emission Ceiling s directive aims at providing a cap on how much of each pollutant can be emitted in Europe, wi th emission limits defined by member states via reduction targets to be reached in the coming y ears. Caps have been set generously high for many pollutants. Others, such as mercury, have eve n been excluded from the regulatory system entirely.
- Emission source legislation: the pollutant emission from big emitters is regulated where it is released, requiring the implementation of alternati ve and/or advanced technologies to reduce the emissions. For the transport sector, all vehicles a nd machines are regulated at the source but the use of obsolete tests means far more pollution is g enerated on the road than in official tests. Different modes have required different innovations , and emission limit values have improved significantly since the first implementation in 199 2. Modes that were introduced later are not facing similar challenges because they can benefit from technologies developed earlier. Nevertheless, some modes (mainly barges and diesel locomotives) are lagging behind (Figure 1).

[6] 60,000 killed annually: UK's misjudged air pollutio n highlighted in upcoming report, http://rt.com/uk/210335-pollution-deaths-traffic-ni trogen/

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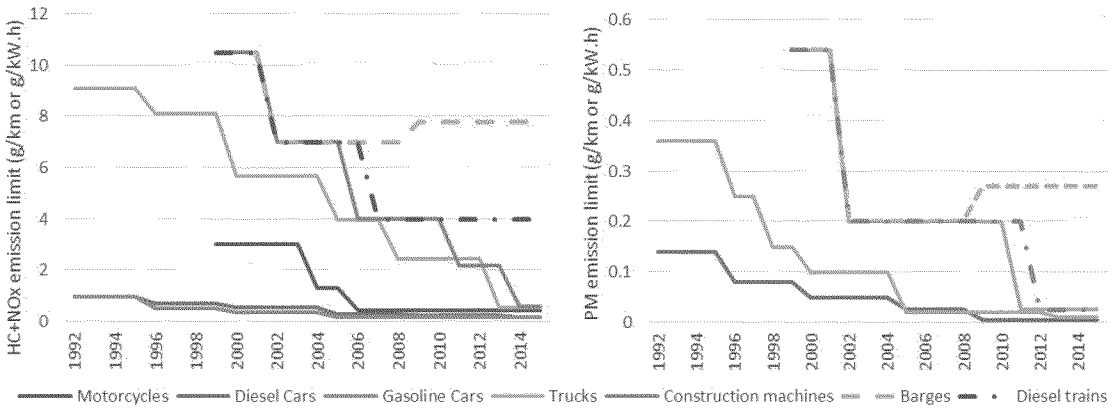

Figure 1. Emission limits evolution over time for PM and HC+N O_x, by mode

- The EU Infringement procedure: in the case of any m ember states not respecting a European law, an infringement procedure is engaged towards the no n-compliant member state(s). This is especially true for air quality legislation, with m ore than half of the member states currently under infringement procedure for not respecting the Europ ean law for at least one pollutant (Figure 2).

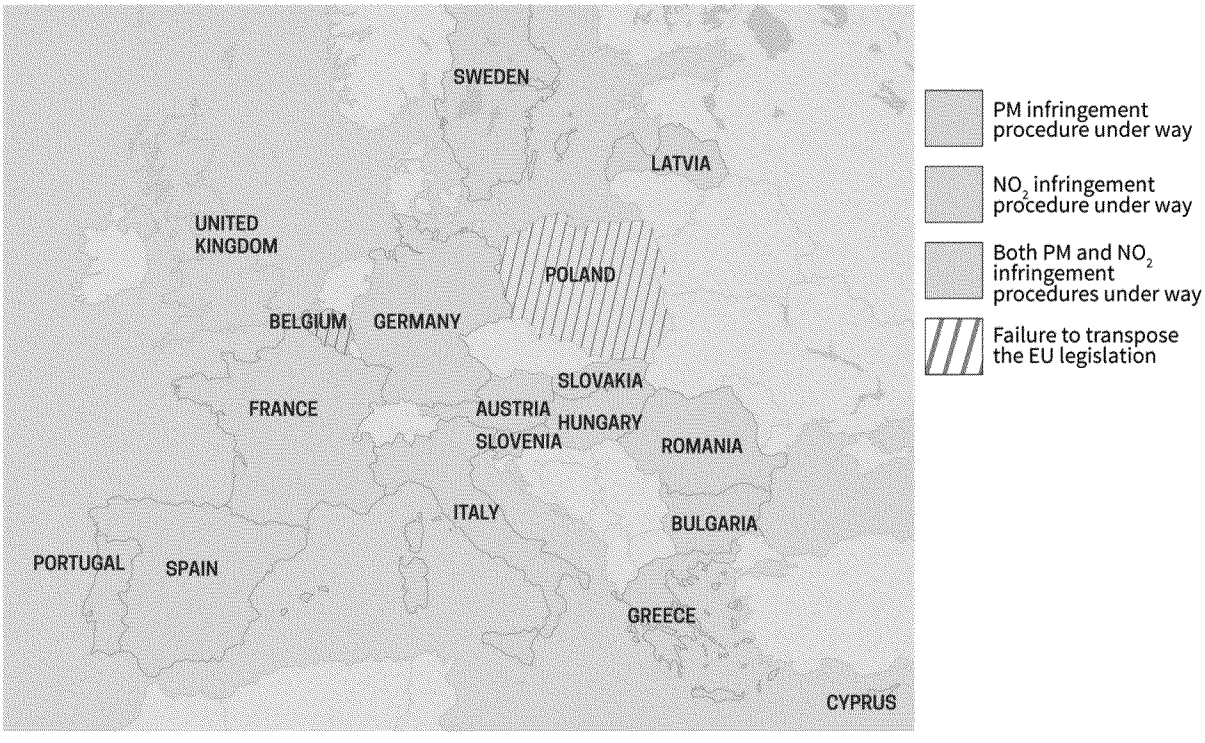

Figure 2. EU member states under infringement procedures on a ir quality legislation

This set of legislative acts forms what is called t he EU Air Quality Strategy. A more extensive descri ption of each legislative tool, with a specific view on tran sport related issues, is given in Annex 2.

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1.4. Road traffic and air pollution

1.4.1. Vehicles' contribution to urban air pollution

Because of its ubiquity and proximity to human habi tations and public spaces, road traffic remains a major contributor to many of our air quality proble ms and contributes an ever-growing share. For example, it produces 80% of the particulates in cen tral London and 46% of all the nitrogen oxide emissions in Greater London [7]. These values are likely to be fairly typical of o ther large towns and cities across Europe, and remains the case in spite of the efforts outlined above to curb emissions from new vehicles via tighter legislation. The latest data from the EEA's database of air pollution illustrate s the impact of traffic on overall air pollution [8].

Some pollutants have been successfully tackled. Fig ure 3 illustrates a clear 'success story' for vehic le emissions controls - carbon monoxide. Back in 1990, nearly half of all traffic-related monitoring stat ions registered exceedances of the currently allowed dai ly maximum value. However, the introduction of the three-way catalytic converter to spark-ignition eng ines led to a clear and rapid improvement throughou t the 1990s, which has been maintained since then. Wi th occasional weather-related spikes, improvement continued through the last decade and non-attainmen t has now been virtually eliminated at all station types.

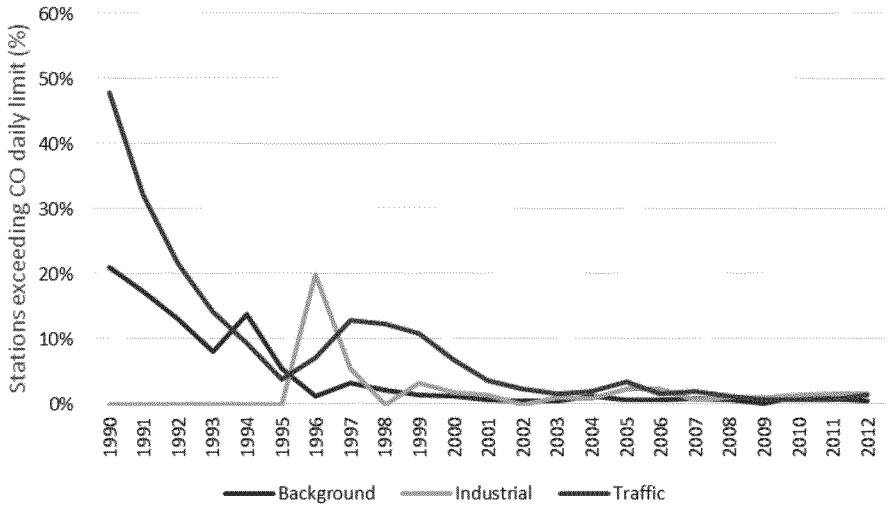

Figure 3.Carbon Monoxide: % of Stations Exceeding A llowed Daily Maximum

[7] Mayor of London, 2010, Clearing the air: The Mayor's Air Quality Strategy

[8] http://www.eea.europa.eu/data-and-maps/data/airbas e-the-european-air-quality-database-8

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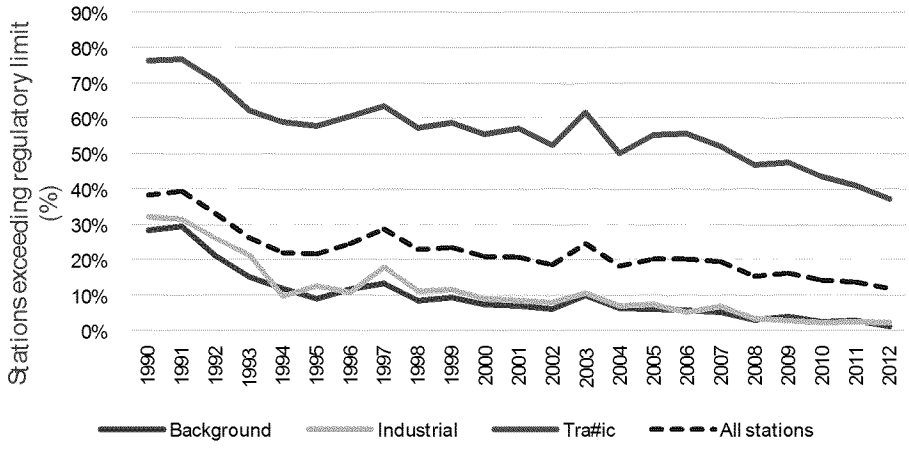

Figure 4. Nitrogen Dioxide: % of Stations Exceeding Allowed A nnual Average

As Figure 4 illustrates, however, it is a very diff erent story for NO". Background and industrial stations have improved steadily over time, much as they did for C O, and exceedances have now almost been eliminated. Traffic stations started from a much hi gher level and have improved fairly steadily (but s lowly) since the mid-1990s. In 1990, around three-quarters of all traffic stations registered exceedances. S till today more than one in three stations are not attai ning the annual average limit value, exposing membe r states to legal proceedings for exceeding the legal limit.

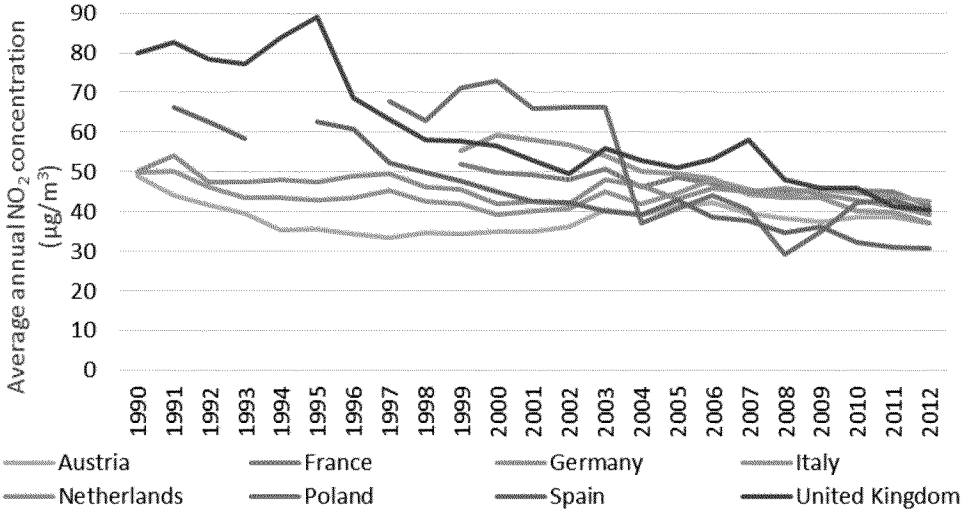

Figure 5. Average NO_2 Annual Mean from Traffic Stations by Country

Figure 5 shows the progress made in reducing averag e pollution levels of NO_2 at traffic stations for each of the eight largest member states. Most of these Stat es show the same slow downward trend of Figure 4; with Germany being an exception by having showed ve ry limited progress for the last decade. The UK has made slightly more progress than the others but als o started from a very high base. Only Spain is now significantly below the limit value of 40 g/m^3, with others improving gradually but all still ave raging around the limit value.

This is clear evidence that the problem of traffic- related emissions has not yet been solved, in spite of tightening limit values for new cars. Furthermore, concentrations of pollutants in vehicles and near roadways are often appreciably higher than those me asured at fixed monitoring stations, so these figur es may understate the impacts on some motorists and ot her road users[9].

As noted above, pollution is often at its worst in major conurbations for much the same reasons; that is, the intensity of emissions is greater and the urban landscape impedes their rapid dispersion. Wind, ra in, and ascendant air currents are often a great ally i n hiding the real face of air pollution in cities. The extent of air pollution in cities is only revealed when th e weather conditions offer no dispersion, and this very often leads to long and severe air pollution episod es in cities.

Thousands of people die prematurely in European cit ies each year because of air pollution. Warm, still weather over Paris in March 2014 and 2015 led to ex tremely high levels of particulates and concern for citizens' health. This prompted the authorities to ban half of all conventional cars and make public transport systems temporarily free for travel. Look ing for a more long-term solution, the mayor of Par is has proposed a ban on diesel cars in the city by 20 20 – a controversial suggestion in a country where well over half of all new cars are diesel-powered. [10]

1.5. Why urban air pollution is not improving – test versus real-world driving

Predicting future air quality across Europe is an e xtremely complex task and involves many uncertainti es. However, one of the key assumption made in the Clea n Air For Europe (CAFE) process (Annex 2) when calculating the likely future contribution of traff ic emissions to poor local air quality was that any percentage reduction in new car limit values would lead to a corresponding percentage cut in real-worl d emissions on the road. As Shown in this report, it turned out to be severely wrong in a number of case s.

In a recent publication [11], T&E highlighted the growing gap between tailpipe CO " emissions and fuel consumption as measured on the official test cycle and the significantly higher levels of fuel consump tion of the same cars on the road. This ever-growing 'ga p' between real-world driving emissions (RDE) and t est results was found to arise because of:

- An unrealistic and undemanding test cycle no longer representative of real-world driving conditions;
- Too many flexibilities and loopholes in the testing protocols that allow carmakers to game the system;
- Lack of transparency in the testing procedures; and
- Growing pressure on carmakers to game the system as regulated limits on CO " become increasingly stringent (for CO " in particular, substantial fiscal incentives on th e lowest-emitting cars added further to this pressure).

[9] See for example http://www.epa.gov/otaq/nearroadway.htm

[10] http://www.nytimes.com/2014/12/16/world/europe/a-pl an-to-limit-cars-in-paris-collides-with-french-poli tics-.html?_r=0, http://www.lefigaro.fr/conjoncture/2014/12/07/20002-20141207ARTFIG00066-anne-hildago-ne-veut-plus-du-d iesel-a-paris-d-ici-2020.php?print=true

[11] Mind the Gap! Why official car fuel economy figures don't match up to reality, 2013, T&E, http://www.transportenvironment.org/publications/mi nd-gap-why-official-car-fuel-economy-figures-don't- match-reality

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In the next chapter, we will show that the situatio n is much worse for regulated pollutants than it is for CO"; that is, for some kinds of vehicles, the ever-tig hter Euro standards have not been matched by simila r cuts in actual emissions on the road. Indeed, the d ivergence between test cycle and real-life emission s levels of regulated pollutants can be even more ext reme under certain driving conditions than the fuel economy gap. Driving characteristics can lead to a 'spike' in emissions much more dramatic than any impact on fuel and CO ". These sorts of effects can largely or totally cou nteract the tightening of limit values over time, and there is now substantial evid ence to back this up.

1.6. How long-term air pollution is expected to remain a n issue under different scenarios

Recently-updated projections for the UK by the nati onal environment ministry Defra indicate that some exceedances will persist even beyond 2030 [12]. Similarly, for the Paris region it is forecast th at at least 750km of road will exceed NO_2 limits in 2020 and 220km will exceed PM_{10} limits[13]. Other EU member states have similar concerns.

Indeed, as all official estimates tend to be based on the assumption of improving levels of real-world emissions from newer vehicles in line with Euro sta ndards, it is likely that even these projections ar e overly optimistic.

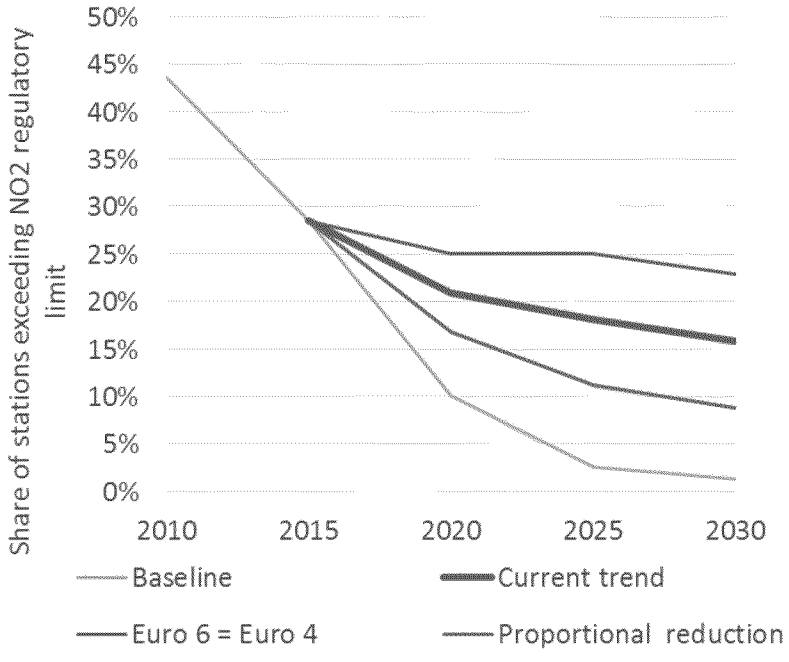

Figure 6. Future NO_2 noncompliance under a range of assumptions

Source: adapted from National Emission Ceiling Impa ct Assessment [14]

For example, Figure 6 above is adapted from the Eur opean Commission's impact assessment of its most recent air quality measures. This illustrates the f uture trajectory of NO_2 compliance under a range of assumptions about the future emissions from diesel cars under Euro 6. It shows that if future diesel c ars deliver significant reductions in NO_x emissions as the legislation intended, noncomplian ce with NO_2 limit

[12] Defra website: Updated projections for Nitrogen Dioxide (NO_2) compliance – http://uk-air.defra.gov.uk/assets/documents/no2ten/ 140708_N02_projection_tables_FINAL.pdf

[13] Évaluation prospective des émissions et des concent rations de polluants atmosphériques à l'horizon 202 0 en Ile-de-France – Gain sur les émissions en 2015 , 2012, Airparif, www.airparif.asso.fr/ pdf/publications/ppa-rapport- 121119.pdf

[14] http://ec.europa.eu/environment/archives/air/pdf/im pact_assessment_en.pdf, Figure 8

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values will be virtually eliminated by 2025; and if it delivers only a proportionate reduction in emissions, then noncompliance will be reduced, with about 10% of traffic stations exceeding the NO_2 regulatory limit. If, however, as currently is the case, Euro 6 emissions turn out to be only marginally better than Euro 4, then there will be limited progress in eliminating problems with nitrogen dioxide pollution. If the Euro 6 procedure remains unchanged, a significant share of monitoring stations will still be exceeding NO_2 regulatory limits in 2030.

1.6.1. Non-Exhaust emission sources

Most of the focus on air pollution from transport is on the pollution from exhaust gases. Nevertheless, tyre, brake, and road wear is also emitted pollution into the atmosphere, mainly in the form of particulate matter. Most studies trying to quantify the amount of particulate emissions due to tyre, brake, and road wear offer diverging conclusions [15], and it is therefore hard to determine the individual contributions of these sources. . One such study led by the UNECE PMP IWG is trying to define harmonized test conditions to measure such wear. Recent reports highlight that brake wear could be measured reliably in the near future, but this is not expected to be the case for road and tyre wear[16].

Another source of emission is the re-suspension of particulates already emitted that are lying on the road. Specific road treatment to glue such particulate (with what effect on road friction?) or traffic reduction measures appear to be the most adequate options to limit the re-suspension of particulate.

Chapter 2 now gives further details of the issues surrounding the 'gap' between emissions testing limits and emissions under real-world driving conditions.

2. Why Euro standards are failing

2.1. Applying the Euro emissions limits to road vehicles – EU type approval

The emission limits for cars and vans that were outlined in Section 1 are applied through a laboratory test procedure partly designed in the 1970s by the United Nations Economic Cooperation for Europe (UNECE). It is intended to test vehicles under conditions similar to real-world road conditions. Euro standards for cars set limit values for the regulated pollutants (carbon monoxide, hydrocarbons, NO_x and particulates) that must not be exceeded during a chassis dynamometer test using the New European Drive Cycle (NEDC) test cycle. More recently, CO" emissions, non-methane hydrocarbons, and particle number (PN) have been added to the emissions tests as variables to be measured.

The New European Drive Cycle (NEDC) test procedure which is used in the EU was designed in such a way that it would be simple and relatively quick to apply, and that the results for tested vehicles could be easily compared and reproduced in repeat tests. To achieve this, the test is standardised to a high degree in its driving conditions, speed profile, ambient conditions, etc. The speed profile of the test cycle is illustrated in Figure 7 below.

[15] http://www.eea.europa.eu/publications/emep-eea-emission-inventory-guidebook-2009/part-b-sectoral-guidance-chapters/1-energy/1-a-combustion/1-a-3-b-vi-road-tyre-and-brake-wear.pdf
http://publications.jrc.ec.europa.eu/repository/bitstream/JRC89231/jrc89231-online%20final%20version%202.pdf
16 http://www.unece.org/fileadmin/DAM/trans/doc/2015/wp29grpe/GRPE-71-23.pdf

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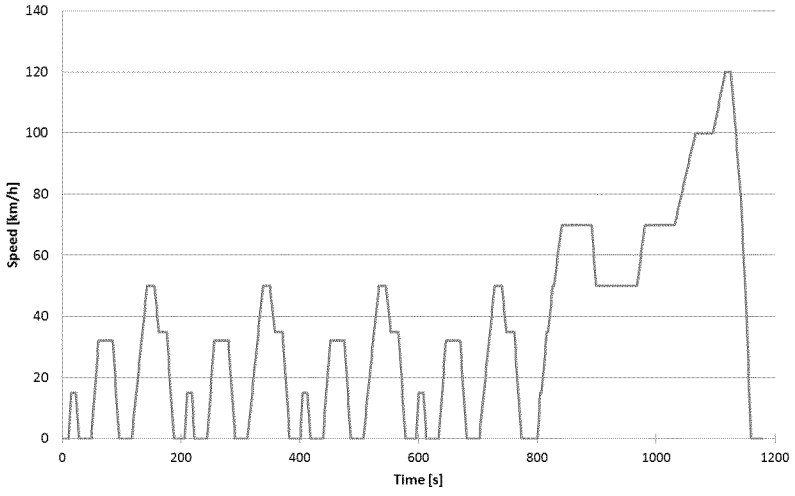

Figure 7. Vehicle speed trace of the NEDC test cycle

The entire NEDC covers a distance of just over 11 km in 1180 seconds (just under 20 minutes) at an average speed of 34 km/h. The test cycle is characterised by low accelerations and a low vehicle speed relative to real-world driving. This also results in a rather low engine load as compared to real-world driving behaviour. Additionally, the vehicle is stationary for 24% of the entire test and decelerating for a further 16%. In fact, this driving cycle was not derived from real driving but developed synthetically into a stylistic pattern with repetitions of the same kinds of speeds and accelerations to facilitate its accurate repetition. Since the late 1990s, cars have become progressively more computer-controlled, enabling car manufacturers to produce vehicles specifically designed to produce low emissions during the laboratory test. The NEDC test cycle is obsolete and entirely unrepresentative of the real-life operations of the tested vehicles.

2.2. The growing gap between test cycle and real-world driving

As a result, the standardised test covers a tiny share of the driving situations and conditions that vehicles would encounter during their everyday driving on the road. To put it more technically, there are only a few limited areas of the entire engine 'map' that are actually engaged during the test cycle. An engine map is the diagram that shows the operating area of the engine with engine speed on the horizontal scale and engine torque on the vertical scale. A typical engine map under the NEDC cycle is illustrated in Figure 8 below for a fairly modest-sized diesel engine.

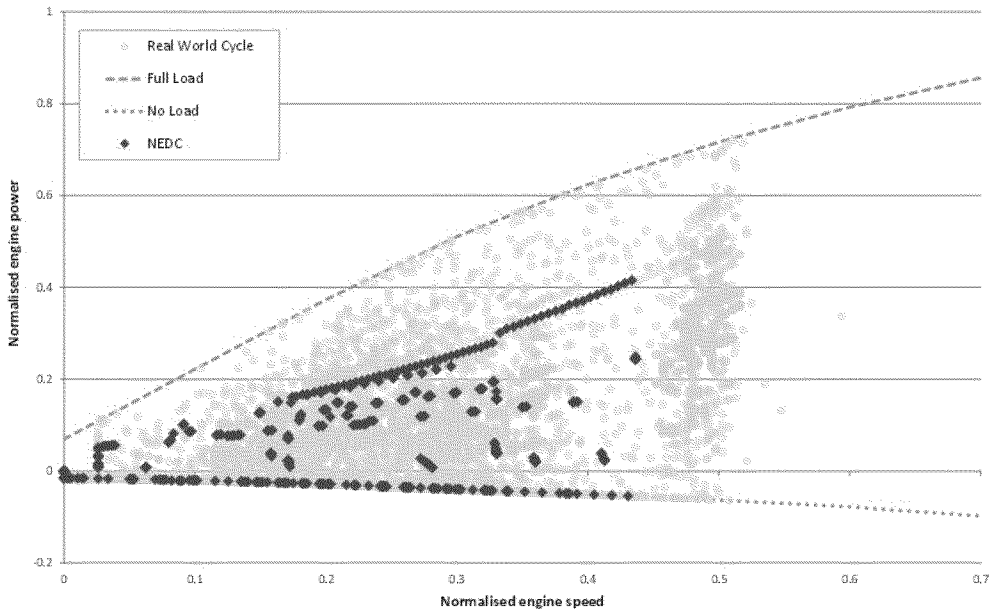

Figure 8. Engine map comparing engine load distribution in th e NEDC and 'real-world' driving cycles for a C-segm ent car with a 80 kW diesel engine

In this diagram, the upper limit of the map is show n by the maximum torque curve – the upper dotted li ne showing the maximum possible power output at a give n engine speed. The lower dotted line is the lower limit, when the engine is under no load because the vehicle is coasting, decelerating, or stationary. For each of the two cycles shown, each dot represents o ne second of the test. For the real-world test, the numerous grey dots form a cloud that populates most of the engine map up to a given maximum engine speed; for the NEDC, the dots are very sparsely sca ttered by comparison. Many of the latter lie on the no load curve, reflecting the high proportion of the t est spent decelerating or stationary, while the vir tually continuously sloping line of dots halfway up the ma p reflects the regular and repeated accelerations shown in Figure 8. This represents the highest load encountered on the NEDC, but it is still far short of the maximum power output of even such a modest-sized en gine, reflecting how gentle the specified accelerations are by modern standards. Elsewhere, t he NEDC dots are very sparse and almost all fall within only a small area of the full engine map.

This enables manufacturers to optimise emissions on ly for the limited areas of the red dots, while out side these areas the engine and/or aftertreatment equipm ent may be optimised for other engineering goals (e.g. low fuel consumption, driveability, power) at the cost of increased emissions.

Before the 1990s, there was no need to apply compli cated engine control measures or after-treatment systems to fulfil the emission standards, as the st andards were not very stringent. As a result, the e mission performance in the real world was equivalent to the type-approval values in spite of the undemanding test cycle. However, owing to regulatory pressures and other reasons, computerised engine management systems have now become far more sophisticated and can control engine and after-treatment performance with great precision for every part of the engine map. At the same time, engines have become more powerful, so the NEDC populates an ever -smaller part of the whole engine map. Both of these trends make it easier to manage the engine di fferently in NEDC conditions than elsewhere.

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Thus the connection between emissions on the road and during the test has been gradually lost. The laboratory test as it is now is obsolete, and this situation has led to the growing gap between real-world and type-approval emissions for both pollutant and CO_2 emissions.

2.2.1. Real-life pollutant emission measurement

The gap between laboratory and real-life emissions is nothing new and emission inventories software have included more realistic emission factors for pollutants for some years now. Tested vehicles are usually a few years old, abecause emission inventories focus on the most popular vehicles in the fleet, so often older than Euro 6. Vehicles are mostly tested on a chassis dynamometer using a more demanding test cycle, such as CADC or Artemis. The data available is now coordinated by the EU JRC in the ERMES group.

2.2.2. Summary of cycle optimization evidence

A number of independent studies have now confirmed the chasm that exists between emissions measured in official tests in a laboratory and those emitted in real life.

A summary of the main reports on this topic can be found in Annex 3. All studies show that Euro 6 diesel cars NO_x emissions exceed the legal limit by a factor of 5 to 10, when tested under stringent conditions using a Portable Emission Measurement System (PEMS) on open roads (Table 3). A small number of vehicles nevertheless manage to reach the legal limit in real-life conditions, showing that existing technologies can be up to the challenge of meeting emission limit in real-life conditions.

Author	Year	N° of Euro 6 diesel tested	Type of measurement	Test severity	Average NO_x CF	N° of vehicles reaching the legal limit
EU JRC	2012	1	PEMS	Severe	2.6	0
INFRAS	2013	9	Dyno - CADC	Mild	4	NA
TNO	2010-2015	16	Dyno	Mild	2.9	1
		7	PEMS	Severe	5.2	0
ICCT	2014	15	PEMS	Severe	7	1
ADAC	2015	70	Dyno - WLTC	Weak	2.5	18
Baden Württemberg	2015	3	PEMS	Severe	4.2	0
Emission Analytics	2014-2015	25+	PEMS	Severe	4.5	3

Table 3. Summary of public domain data sources on more stringent Euro 6 diesel NO_x testing

The evidence for passenger cars and heavy duty trucks is now robust, but this is not the case for light commercial vehicles, for which very limited data on real-life measurement have been identified to date. They are nonetheless expected to perform no better than passenger cars.

Approaches to 'real-world' testing undertaken

On-road testing of vehicles will typically give the best and most representative evidence of the size of the emissions gap. In the past, on-road testing of emissions was very difficult to perform, but now vehicle emissions can be quite reliably measured on the road using a Portable Emission Measurement System (PEMS). PEMS is a device that is not part of the vehicle but installed to the vehicle to determine the concentration or the amount of gaseous or particle pollutants, as shown in the picture below.

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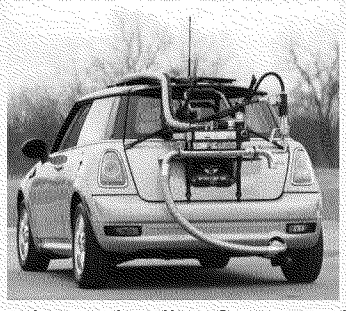

Even though each on-road test is unique, and can therefore not be easily compared with another test, PEMS testing covers a wide range of operating conditions. Car manufacturers should make their cars resilient to this wide variety of usage patterns instead of trying to make them more uniform.

Tests in the laboratory with a more representative test cycle than the NEDC (such as the CADC) mainly reflect the gap generated by the limitations of the test cycle itself. Such tests are reproducible so the results allow for comparison and verification, but they do not usually reflect the possibility of unrepresentative road-load settings or other weaknesses in the testing procedures, and may therefore understate the full scale of the emissions gap in the real world.
The light-duty vehicle test cycle is expected to switch away from the NEDC towards the World Light duty Test Procedure (WLTP). Even though the WLTP will cover a much broader range of engine operating conditions, it is substantially longer, making the cold phase proportionally less important for emission limits expressed in g/km (see section on WLTP).

2.3. Aftertreatment technologies

The increasing stringency levels of the Euro standards has required vehicle manufacturers to apply more sophisticated engine control systems and calibration strategies and introduce aftertreatment technologies such as those described below to meet Euro Standards. From the outset, the Euro 1 emission standard had the effect of requiring positive ignition-engined (PI or spark ignition – mainly petrol or gasoline, and also natural gas vehicles -NGVs- and liquefied petroleum gas –LPGs) cars to be fitted with three-way catalytic converters. These have become more sophisticated over time but the technology remains the same, proving its effectiveness. As emission limits have tightened, more sophisticated technologies have been needed, particularly for diesel engines. Currently, a vehicle complying to Euro 6 standards will need a combination of different in-engine and aftertreatment technologies.

2.3.1. Gasoline vehicles (positive ignition –PI-engines)

The main regulated emissions produced by gasoline or petrol-engines (and other PI engines such as natural gas and liquefied petroleum gas) are HC, CO and NO_x, plus PM and PN for direct injection gasoline engines.

2.3.1.1. Three-way catalytic converter (TWC)

All PI vehicles certified to Euro standards since 1990 are equipped with a TWC, a very reliable and effective solution for pollutant emission abatement. Essentially, the catalyst promotes three simultaneous reactions that oxidise carbon monoxide and unburnt hydrocarbons to form carbon dioxide and water, while also reducing NO_x to elemental nitrogen. To allow these reactions to take place in the most effective way, the engine needs to operate in a narrow range of air/fuel ratios, slightly above the stoichiometric point at which the amount of air present is exactly sufficient to burn all the fuel in the mixture. To keep the engine at the stoichiometric point, the engine is fitted with an oxygen sensor in the exhaust system that feeds back to an advanced air/fuel control system in the engine. TWCs do not work equally well in all conditions (for example, when the engine is cold), but the evidence still suggests that TWCs now work quite efficiently overall, and the conditions that give rise to excess emissions are limited (for example, at very high speeds where the mixture is richer where excess fuel is used to cool down the TWC).

2.3.1.2. Gasoline particulate filter (GPF)

Emissions of particulates are also generally very low from PI engines, with the notable exception of direct-injection engines, which do produce significant amounts of ultrafine particles. These may therefore need

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additional emissions reduction technology; for example, a GPF. A filter for a PI engine is similar to the diesel particulate filter described below but is cheaper and simpler to implement [17].

2.3.2. Diesel vehicles (CI engines)

The operating principle of the diesel engine is to inject the fuel directly into the cylinder, in which there is more air available than needed for the combustion (known as lean burning). However, this excess air in combination with a high combustion temperature encourages the formation of NO_x in particular. The fuel directly injected into the cylinder can also lead to PM formation due to incomplete combustion. CO and HC emissions are generally very low in diesel vehicles because of the lean engine operation.

2.3.2.1. Engine management

NO_x emissions can be influenced simply by the timing of the fuel injection in a diesel engine: late injection reduces the engine-out NO_x emissions but at some cost in fuel efficiency and vice versa. This trade-off leads to an incentive for manufacturers to calibrate their engines towards low emissions during the test cycle, while for those conditions not encountered during the test cycle the primary aim is to improve fuel efficiency. To meet Euro 5 NO_x standards, this and other relatively minor adjustments were sufficient, but to meet the increasingly stringent limits, more advanced reduction technologies are needed, as set out below.

2.3.2.2. Exhaust gas recirculation (EGR)

EGR recirculates some of the exhaust gas back into the engine. As a result, there is less oxygen available in the cylinder for combustion, leading to a lower combustion temperature and in turn to less NO_x production. The rate of EGR that can be applied depends on various engine parameters, of which engine load is the most important, as high engine loads require more oxygen. This drawback may tempt manufacturers to apply lower EGR rates (or none) for conditions outside the operating envelope of the NEDC. Improved EGR systems can comply with the existing NEDC Euro 6 NO_x limits in a laboratory by combining two EGR circuits. However, there are numerous reliability concerns regarding the EGR valves getting stuck due to their getting dirty (especially when the EGR loop is high pressure), creating a further incentive to close it outside NEDC operating points. This leads to much higher emissions in real-world use.

2.3.2.3. Lean NO_x trap (LNT)

The lean NO_x trap is a catalytic converter that combines an oxidation catalyst, an adsorber to store NO_2 under lean-burn conditions, and a reduction catalyst. Once the adsorber is saturated, unburnt fuel must be introduced for a short time to deliver reducing compounds such as HC, CO, and hydrogen so that the NO_x is desorbed and reduced to nitrogen. LNT technology is reportedly capable of NO_x reductions up to a level of 70 to 90%, but like most aftertreatment devices, there is a fuel penalty involved for the regeneration cycles.

2.3.2.4. Selective catalytic reduction (SCR)

SCR involves a catalytic converter that can reduce NO_x to nitrogen through the use of an external reducing agent, known in Europe as AdBlue® (mainly made of urea). This is stored in a separate tank in the vehicle and is normally refilled during routine servicing (this requirement is seen as a drawback of SCR by carmakers). The catalyst operates at a high temperature (above approximately 190°C), so it does not work until the engine is warmed up, and it potentially may not work at all during short trips with low engine loads and frequent stops. An SCR system can achieve NO_x conversion rates of up to 80-95%, depending on the rate of application of the AdBlue®. Using the SCR over all operating points would imply a urea flow of around 2 litres per 1000 km. This would require refilling of a typical 16 litre tank at intervals of 6 400 to

[17] http://www.transportenvironment.org/sites/te/files/publications/GDI%20Briefing_final_T&E_revised.pdf
http://www.transportenvironment.org/sites/te/files/publications/TUV-Technical_report.pdf
http://www.theicct.org/sites/default/files/publications/GFPworkingpaper2011.pdf

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8000 km[18], much more than expected today by most OEMs (the refill is to be done by dealerships during maintenance operation, approximately every 20 000km). For this reason, manufacturers underdose with urea, leading to unnecessarily high emissions on the road.

2.3.2.5. Diesel particulate filter (DPF)

This technology involves a wall flow filter which will physically trap the solid particulate matter in the exhaust gas, including the solid carbon fraction and fine particles. The particulate reduction rates of DPFs are high, reportedly at least 90-95%. All diesel vehicles are expected to be equipped with a closed DPF to meet the Euro 6 particulate limit. The filter has to undergo a regular regeneration process to remove the accumulated particles. Like some of the other aforementioned technologies, this process incurs a small fuel penalty. The DPF must be integrated into the engine control system to ensure reliable regeneration. Regeneration events are nevertheless excluded from the measurement of the emissions in a PEMS and laboratory test. Some evidence shows that the number of particulates emitted during a regeneration is multiplied by a factor of 2 to 10 [19]. Those emission are reported nowhere during the type approval process, demonstrating an obvious loophole in the current system that needs to be addressed.

2.3.2.6. Combining solutions

To reach optimum emission reduction, several aftertreatment technologies and devices can be combined, as each NO_x treatment technology applies optimally to different areas of the engine map (Figure 9).

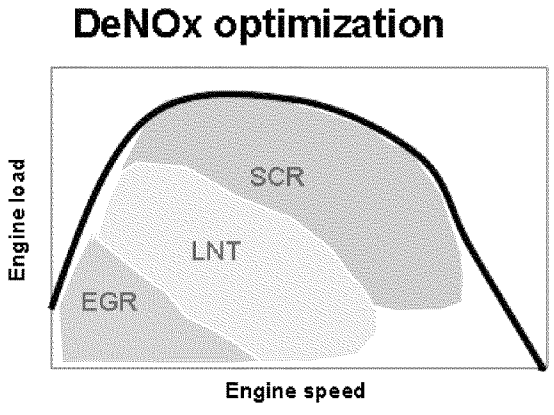

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Figure 9. Descriptive technologies effectiveness for DeNO$_x$ optimization[20]

Motorcycles and an electro mobility strategy

The EU Commission has launched a consultation on the next Euro standards for motorcycles and scooters (L category vehicles). Such Euro 5 standards would be a good opportunity to leapfrog other markets and initiate a massive switch to electric two-wheelers in Europe. Asian countries are leading the electric two-wheelers market, and Europe should not stay behind. Instead, the EU should set low emission limits that would make electric two-wheelers the cleanest and most cost-competitive option for most needs.

Small mopeds and scooters (especially those equipped with two-stroke engines) are disproportionately contributing to air pollution of certain pollutants (including PM, HC, and CO). A

[18] http://www.aecc.eu/content/RDE_seminar/06%20%20AECC%20RDE%20seminar%20AECC%20Clean%20Diesel%20RDE%20Program.pdf

[19] https://www2.unece.org/wiki/download/attachments/16450001/GRPE-PMP-30-03%20Regeneration%20topics.ppt?api=v2

[20] http://www.aecc.eu/content/RDE_seminar/06%20%20AECC%20RDE%20seminar%20AECC%20Clean%20Diesel%20RDE%20Program.pdf

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comprehensive strategy to phase out such vehicles should be a high priority. They could be replaced in most cases by electrical bicycles.

The ultimate goal is to have vehicles with zero tailpipe emissions in order to drastically decrease air pollution exposure. Electrification of the transport sector, together with renewable electricity, is the best way forward today, and T&E is calling the EU to adopt such an electrification strategy as soon as possible[21].

Heavy Duty Diesel Engines

Heavy duty vehicles (HDVs – mostly trucks and buses) contribute disproportionately to the overall pollutant emissions from road traffic. That is, they account for only a few percent of the total road vehicle fleet, but in many cases account for a much larger share of total emissions from road transport. They are such major polluters primarily because:

- ∞ They have much larger, more powerful engines than light duty vehicles, and therefore consume more fuel and emit more exhaust gases for every kilometre driven;
- ∞ They are typically used very intensively; most HDVs travel far greater distances than a normal light duty vehicle over a given period of time.

HDVs are subject to Euro emissions standards similar to those in use for light duty vehicles, with the latest Euro VI limits coming into force in 2013-14. As with LDVs there is a prescribed test cycle, but as HDV engines are so large and the same type of engine could end up in a number of very different vehicle types, engine emissions are measured on a laboratory test bench rather than in a whole vehicle, and are expressed in g/kWh of engine power output. This adds a further layer of uncertainty in mapping from test results to real-world emissions. However, there are, under Euro VI, additional provisions for real-world testing using PEMS, and this is reflected in the results set out below.

The latest test results were summarised and analysed recently by TÜ Graz for the Handbook on Emission Factors (HBEFA) which was released in the summer of 2014. For HDVs certified to Euro VI, SCR and closed DPF are now the norm.

Although it is still early and there are limited real-world performance data, Euro VI-certified vehicles and engines have been found to have very low NO_x levels in most real-world cycles, and only some showed higher NO_x at low loads. The limit values for particle mass and particle number were clearly met in the real-world simulations. This suggests that the additional PEMS tests in Euro VI have now been effective at bringing down real-world emissions in line with the tighter limit values. Unfortunately, most of the data generated by the In Service Conformity (ISC) provision in the heavy-duty legislation remains confidential and cannot be accessed by independent parties to assess the reliability and progress of trucks' emissions.

2.4. *Why vehicles can pass the tests but still poison the air*

In its earlier publication Mind the Gap!, T&E described in detail how carmakers are able to claim much-reduced CO " emissions for new cars, while evidence from vehicle fuel economy and repeat testing suggests that the improvements are significantly less than is claimed. The same processes, which are outlined below, also account for the generally much larger gap between the limit values and actual emissions of the regulated pollutants.

There are several reasons why the gap for some regulated pollutants (most obviously diesel NO_x) can be much larger than it is for CO ":

- ∞ The NEDC test cycle itself is not representative of real-life driving profiles;

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- Test conditions are optimised by the manufacturer to achieve the lowest possible test results that are not replicated on the road. This includes exploiting flexibilities and loopholes in the protocols that govern the testing process in the laboratory and the preceding;
- Off-cycle parts of the engine map are not optimised for air pollution emissions reduction, leading to emissions.
- On-cycle parts of the engine map are optimised for emissions reduction in a way unrepresentative of that achieved in normal driving. This includes "cycle beating" techniques that detect when the vehicle is being tested;
- Some aftertreatment devices only work when they have properly warmed up, so during cold starts emissions are not properly regulated and may be several times greater than in normal operation;
- When the engine undergoes a sudden transition, such as a rapid acceleration or increase in engine load, the vehicle's control technology can take a moment to adjust to the new conditions, and during this time a large 'spike' in emissions can occur.

2.4.1. *Flexibilities in the laboratory testing procedures*

Although the NEDC drive cycle itself is a major weakness in the overall type approval process, there are other deficiencies and loopholes in the protocols that specify how the tests are undertaken. Reflecting these, engineers undertaking the test can use a number of 'tricks of the trade' that further increase the likelihood that the tested emissions will fall well below those in the real world:

- **Fully charging the battery before the test and disconnecting the alternator:** Recharging the battery creates a significant extra load on the engine, and consequently a significant increase in emissions, so ensuring that the battery is fully charged or that the alternator is disconnected or disabled helps ensure that the test vehicle has to do less work.
- **Pulling back the brake calipers:** Even when the brakes of a car are not being applied, there is often some contact and friction between brake pads and discs, and this will increase the energy required to go through the test and thus raise emissions. Hence disconnecting the brakes completely or ensuring that the pads are fully retracted can reduce the energy required to power the test vehicle over the test cycle.
- **Losing weight:** Even vehicles of the same model can vary quite a bit in weight, according to engine size, trim, optional extras, and other equipment. It is nonetheless allowed to programme the rolling road with the barest minimum weight class of the most basic version, with everything that can be taken off or taken out removed.
- **Testing the car at 29°C or above :** The regulations specify that the test must be conducted at an ambient temperature of between 20 and 30°C. The engine warms up faster and runs better (with lower emissions) at a higher temperature, so starting the test as warm as possible helps, even though this is far above the temperatures normally experienced in Europe.
- **Changing the oil:** As the lubricant to be used in the engine and other moving parts is not specified as part of the test protocols, carmakers can use a special test lubricant for the purpose of the test cycle. This too reduces the load on the engine relative to what it would be in a similar production-line car.

2.4.2. *Road load and the coastdown test*

Test procedures are undertaken on a rolling road or chassis dynamometer, as described above. However, the rolling road cannot simulate all aspects of the test drive accurately without additional information about the vehicle. For example, as the vehicle is stationary, the rolling road cannot accurately reflect aerodynamic drag caused by air passing over and around the vehicle at speed. Equally, it needs to be programmed with the weight or inertia of the vehicle in order to simulate acceleration and deceleration realistically, as well as the rolling resistance, which reflects the amount of energy lost as the vehicle's tyres interact with the road surface. These factors taken together make up a value known as the 'road load', which has to be programmed into the rolling road in order to allow it to simulate a real drive more accurately.

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The simplest and most common method of deriving a v ehicle's road load is known as a coastdown test. In essence, this involves accelerating the test vehicl e to a given speed on a test track, then measuring how far the vehicle travels in coasting to a standstill . This distance is then translated into the road lo ad value that is later programmed into the rolling road.

There are, however, known to be a number of 'flexib ilities' in the way this test is conducted that can significantly extend the distance over which the ve hicle will coast and hence minimise the road load value. An unrealistically low road load result redu ces the emissions measured under any subsequent laboratory test bed procedure, irrespective of the test cycle used.

Known 'tricks of the trade' include the following:

- **Removing all optional extras:** Clearly anything that adds weight or drag to the v ehicle will cause it to travel less far in the coastdown. Hence, any additional feature that can be easily removed for the test is removed, such as roof racks, additional lights, and even the nearside wing mirror.
- **Over inflating the tyres:** Any vehicle will travel further and faster when its tyres have been pumped up hard, and this practice is not specifical ly excluded in the test procedure.
- **Using a sloping test track:** The procedures only specify that any slope on the test track must not exceed 1%. An error in the NEDC procedure means the averaging of runs in either direction does not correct for the benefits of the downhill run.
- **Smoothing the way:** A smoother test track reduces the rolling resistan ce of the vehicle relative to what it would be on a normal road surface. Indeed, the proprietors of one commonly-used test track proudly boast that they have improved emissio ns and fuel economy figures by between 3.1 and 4.7% since they resurfaced their track in 2009.
- **Improving the aerodynamics:** Another practice that is questionable, but apparen tly not illegal, is to 'improve' the aerodynamics of the test vehicle a nd thereby reduce the effect of aerodynamic drag in slowing it down. This is generally done by carefully taping over every indentation or protrusion in the vehicle body, and in particular t he radiator grille and the cracks around all the doors and windows and between other body panels.
- **Disconnecting the brakes:** As on the rolling road, disconnecting the brakes c ompletely or ensuring that the pads are fully retracted can redu ce rolling resistance and help the car coast farther.

Road load values have a significant impact on the v ehicle's emissions. T&E tested 6 vehicles, and removing road load flexibilities on those vehicles led to CO_2 emissions rising more than 10%. [22]

Cycle Beating or Cycle Bypassing?

Terminology is important in this context. One term used to refer to attempts to defeat the emissions control legislation is **cycle beating** . In a case of cycle beating, the engine control system recognises that the vehicle is being tested in a type-approval test procedure and switches to a different engine calibration specific ally designed to fulfil the emission standards. With increasingly sophisticated electron ic controls and sensors in modern vehicles, it is in principle quite easy to do this; for example, by detecting that the car bonnet is open, that the rear wheels are stationary during th e drive cycle, etc. This kind of engine control regimen is referred to as a 'defeat device' , and is explicitly prohibited under Euro 6 Regulation EC 715/2007. No carmaker has ever been p rosecuted for cycle beating in the EU but anecdotal evidence suggests that it is widespre ad.

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Most, if not all, of the techniques listed above do not violate the provisions of the relevant legislation and codes of practice, but exploit flexibilities and loopholes within the current rules. They are not therefore strictly illegal under Article 5 quoted above, and instead can be referred to as **cycle bypassing** strategies. As car manufacturers strictly follow the letter of the legislation and are not concerned by its spirit, each loophole in the legislation has to be closed. This leads to very tedious regulation developments that become very long, as all testing details have to be defined and covered by the legislative texts. Going down that road is not the favoured way forward for T&E; however, trust in car manufacturers can no longer be ensured. Evidence of cycle bypassing is gathered in Annex 3.

2.5. Plugging the gap

In order to help minimise the gap between tested emissions and those found in the real world, two new pieces of legislation are planned for the EU:

- Implementing the upcoming World Light Vehicle Test Cycle (WLTC) and its attendant procedures (WLTP)
- A new Real-World Driving Emissions (RDE) Directive.

2.5.1. Overview of the WLTC / WLTP

For some years the United Nations Economic Commission for Europe (UNECE) has been developing a new light vehicle testing regime to give harmonised and more accurate emissions results. There are two main areas in which refinement of the current testing procedures is being pursued:

- Developing a test driving cycle that is more representative for average driving conditions, built up from actual driving data.
- Developing improved test procedures to reduce allowed tolerances and tighten up on known loopholes or flexibilities, such as those listed above.

The work on WLTP is ongoing, but it is scheduled to be introduced into EU legislation in 2017. The following paragraphs briefly summarise the current state of play.

The new **WLTC driving cycle** is far more realistic and dynamic than the NEDC cycle, involving higher accelerations and maximum speeds. The WLTP cycle is 1,800 seconds long (the NEDC being only 1,180 seconds long), so more driving conditions can be tested. The new cycle is illustrated in Figure 10 below.

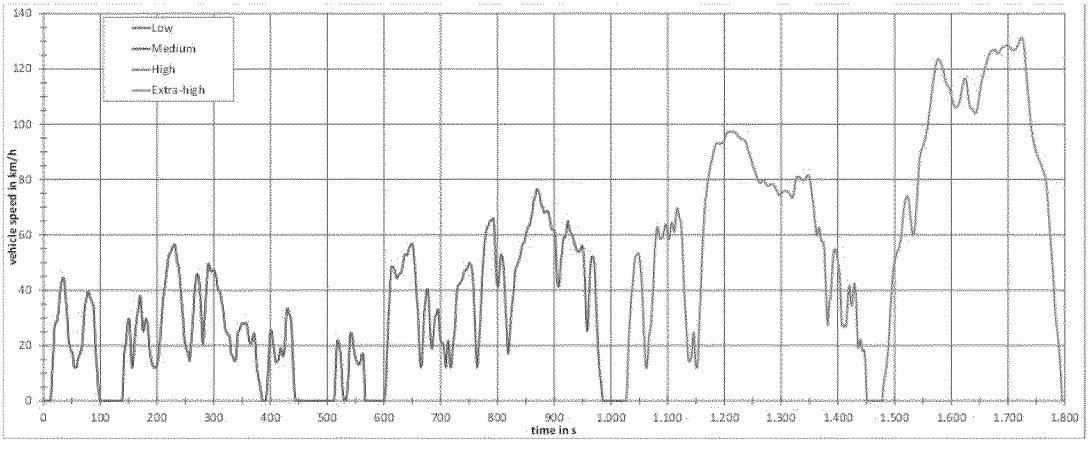

Figure 10. Vehicle speed trace of the WLTC, showing the four phases (low, medium, high and extra-high speed)

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Figure 11 below reproduces the engine map from the NEDC test as in Figure 8, but superimposes that of the WLTP. From this it can readily be seen that the green dots of the WLTP load points cover a much larger part of the engine map, including significantly higher load levels than are ever reached under the NEDC. This in itself makes it much harder to defeat the test.

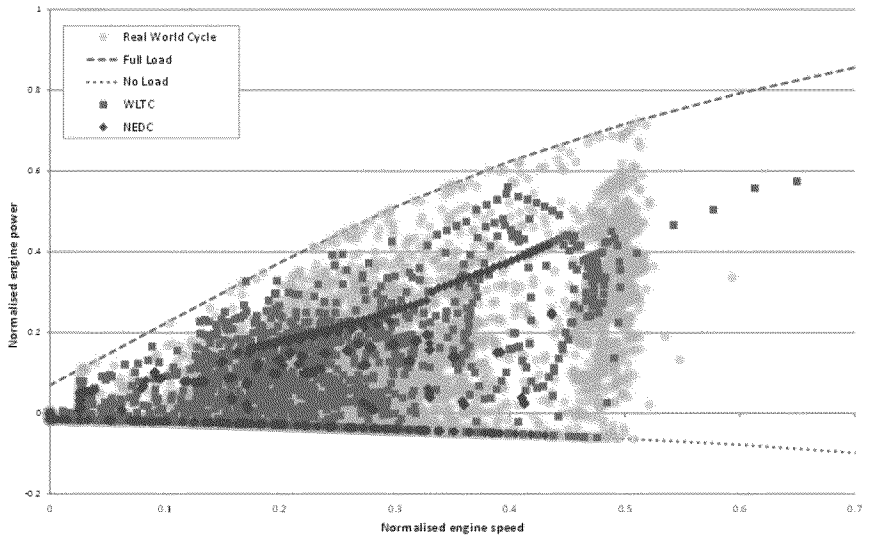

Figure 11. Engine maps of the NEDC and WLTP compared

The main **road load issues** that will be addressed and improved by WLTP are to take proper account of the slope in the test track, better and more rigorous vehicle preparation, and using a more representative test vehicle (e.g. in terms of vehicle mass and inertia).

The **laboratory test procedures** will also be tightened up by incorporating state-of-the-art measurement techniques that reflect the capabilities of modern testing equipment; the start condition of the vehicle's battery will be specified; and a smaller test temperature range (23 °C ±3 °C) has been adopted.

Overall, the more demanding and realistic test cycle, the more stringent coastdown procedures leading to higher road load values, and some of the other stricter specifications should lead to more realistic emissions test results. However, because the WLTP is much longer, the emissions during the cold phase that are critical to pollutant emissions (Figure 12) are proportionally less important for emission limits expressed in g/km. A correlation exercise similar to the one that is being performed for the equivalence of CO_2 emissions between the NEDC and the WLTP will lead to lower emission limits on the WLTP than on the NEDC and needs to be urgently developed by the European Commission. Such a correlation exercise should be put in place in the near future in order to ensure that pollutant emissions limits can be meaningfully measured on the WLTP as well.

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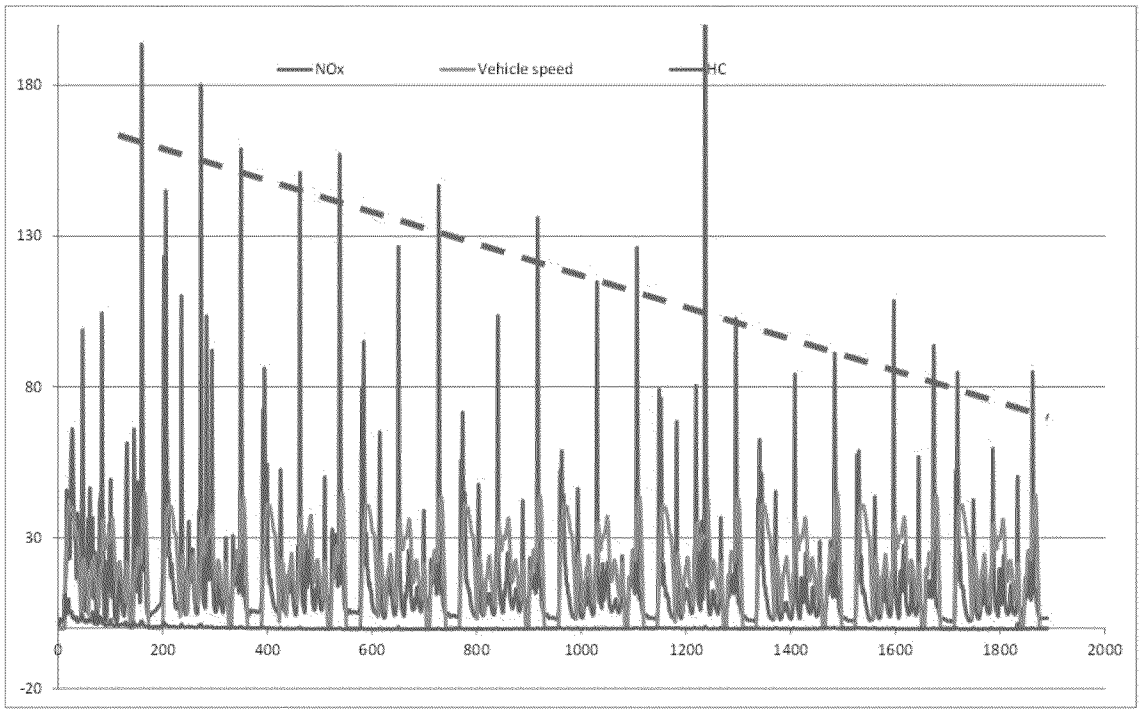

Figure 12. **NO_x emissions on repeated test cycle as engine warms u p**

2.6. Overview of the RDE proposal

The future Real Drive Emission (RDE) legislation fo r Europe should come into force on 1 January 2016an d will first be introduced as a monitoring phase that only demands vehicle testing without limit values. Later on (anticipated in 2017) new vehicle types co ming onto the market will need to meet 'not-to-exce ed' (NTE) limit values which will be defined on the bas is of Conformity Factors (CFs) that define the rati o of measured emissions to the corresponding Euro 6 limi t value. A second step will lower the NTE emissions to the Euro 6 limit, incorporating measurement unce rtainty, at a date to be agreed upon.

The emissions will be measured using PEMS equipment in on-road driving conditions. There is, however, ongoing debate as to how the latter will be circums cribed, so as to be neither unduly extreme nor too undemanding to be realistic. It is envisaged that t he test drive will be substantially longer than the laboratory tests (90 to 120 minutes). Data is then post-processed through data evaluation tools; The Commission opted for two distinct tools to be used: EMROAD and CLEAR. Current versions of both tools d o not deliver satisfactory results and would need to be significantly improved during the monitoring pha se. CLEAR appears to be the most robust tool of the two , but would require a more realistic typical power curve distribution to give more realistic results.

The test procedure and technical characteristics of the equipment and measurement boundaries have been voted on by member states on the 19 th of May 2015. In autumn 2015 the regulation will be finalised and will include NTE limits and dates for complianc e.

Conformity factors have to reach 1 (=meeting the Eu ro 6 legal limit) as soon as possible for all pollu tants and all light duty vehicles in order to make sure t hat air quality limits in densely populated areas a re no longer exceeded.

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2.7. Conformity checking in the EU

As explained above, a vehicle model's emissions are certified in the EU using a single test on a single vehicle. This can be a 'golden vehicle' carefully prepared to give the best possible results, and may not be identical to the production line version because tests are carried out before all details of the final design have been completed.

As such, it is perhaps not surprising that there is the potential for official test results to diverge from real-world values. However, there are ways to keep this divergence in check:

- **Conformity of production checks** can be carried out on vehicles chosen at random off of the production line in order to verify that their emissions do not vary (beyond an agreed-upon margin) from the official values;
- **In-use testing or in-service conformity (ISC)** can be conducted to ensure that real-world emissions do not vary too far from the official values, similar to the NTE tests undertaken in the United States and what is now proposed for the RDE Directive. ISC is already part of the type approval procedure for heavy duty trucks, and is also used retroactively on Euro 5 vehicles. This has lead to drastically lower NO_x emissions on trucks, and heavy duty vehicles today have emission factors (g/km) similar to those for cars [23];
- **Periodic technical inspection (PTI)** procedures should be tightened significantly to detect emission control tampering. About 10% of European taxis are suspected to have removed their DPF, but they still pass their annual PTI with no issues, as the test is not designed to look closely at particulate emissions. PTI schemes should be enforced by using a dual approach involving independent tests during the PTI and monitoring OBD fault codes generated by the vehicle.

In principle, such testing is already carried out in Europe, but the procedures are lax and ineffective. Much of the testing remains in the hands of the carmakers themselves and the related technical services are directly paid for by them. There is little to no independent oversight.

2.7.1. US experience with not-to-exceed (NTE) emission limits

US regulators are far ahead of Europe in their efforts to tighten up on real-world emissions. They began introducing NTE limits as early as 1998 for HDVs and have since extended the approach to other classes of engines and vehicles, including NRMMs. The NTE approach establishes a control area (the 'NTE zone') which defines the area of the engine map that reflects engine speeds and loads expected to be encountered during real-world operation by the class of vehicle in question. Within that part of the map, NTE testing does not specify a particular driving cycle but instead a random period of driving of any type that falls within the bounds of the NTE zone, including operation under steady-state or transient conditions and under a variety of ambient conditions. Emissions are averaged over a minimum time of thirty seconds and then compared to the applicable NTE emission limits, which must not be exceeded for any averaging period.

For light duty vehicles, US regulators have also already applied supplementary emission limits to LDVs that reflect high-speed and aggressive highway driving. Future reform of European testing legislation can benefit from what has been implemented in the US over the last decades.

23
http://www.hbefa.net/e/documents/HBEFA_31_Docu_hot_emissionfactors_PC_LCV_HDV.pdf

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2.8. Outlook for WLTP and RDE in Europe

The WLTP and RDE are both important new proposals s upported by good evidence and generally robust outcomes. They should help to control the gap that has been highlighted between real-world emissions and laboratory test results, although we cannot yet be certain by how much.

There are also several caveats that need to be kept in mind:

- Neither of these pieces of legislation have yet bee n translated into EU law, and both will be subject to the usual legislative procedures at the EU level. A s a consequence, important provisions might be watered down or removed entirely, thereby allowing existing loopholes to persist or new ones to emerge.
- Carmakers are already seeking a long delay before t he introduction of the WLTP into Europe, and are requiring similar delays and very high NO_x Conformity Factors so that the RDE will not exclud e many or any gross polluters.
- Much of the envisaged testing will remain in the ha nds of the carmakers themselves and the commercial testing laboratories who compete for the ir business. Much more independent scrutiny of these arrangements is needed.

For the future, therefore, several issues should be included in the legislative text.

- Conformity Factors should go down to 1 in the near future and include cold start and regeneration events. Without that, the RDE is likely to be ineff ective and diesel cars run the risk of being excluded from the streets, especially in urban area s[24].
- A correlation exercise to determine the pollutant e mission level under WLTP should be put in place.
- Put in place a European type approval authority to collect revenue and fund the national type approval authorities to ensure improved independenc e and the absence of commercial link between car manufacturers and type approval authori ties.

3. The Case of Non-Road Mobile Machinery

3.1. Introduction to non-road mobile machinery

3.1.1. What are non-road mobile machines?

The term non-road mobile machinery (NRMM), as appli ed in EU type approval legislation, covers a very wide variety of machines with internal combustion e ngines which are intended primarily for purposes other than as road vehicles for transporting passen gers or goods.

They range in size from small, portable machines (s uch as hedge trimmers, blowers, etc.) to large off- road construction machines (such as such as excavators, bulldozers, front loaders, road rollers, etc.) and constant-speed machines (such as compressors, pumps and generators). Railway engines and engines for boats on inland waterways are also included in the NRMM category. Agricultural tractors also are subjected to the same emission limits defined for N RMMs.

The vast majority of these have diesel (compression ignition) engines, although some of the smaller vehicles are likely to have spark ignition (PI) eng ines.

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24 http://www.transportenvironment.org/sites/te/files/ publications/2014%2009%2024%20RDE%20-%20a%20last%20chance%20for%20diesel%20cars_FINAL_v2 .pdf

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3.1.2. Emissions from NRMMs

Weak limits set by the 1997 NRMM Directive and its amendments (listed below), incomplete implementation, and inadequate testing have resulted in the NRMM sector becoming an increasingly important source of air pollution, especially of NO_x and particulates (accounting for 15% and 5% of the total EU emissions, respectively). While the PM share is expected to decrease overtime, the NO_x share is expected to increase to nearly 20% in 2020 as emissions from road vehicles and other sources are reduced.

Machinery used in construction and related fields can be a major source of pollution, especially within cities. Workers close to NRMMs can also be directly exposed to high concentrations of engine exhaust over an extended period of time and are therefore believed to be at greater risk of adverse health effects.

3.1.3. The Regulation of NRMM emissions

In the EU, emission limits for non-road vehicles first came into force in 1999, along with a test procedure to measure such emissions. As with road vehicles, limits were tightened over time in a series of stages, as follows:

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- K%,40!LLC!H2+09%2105!"::"(NN(>O
- K%,40!LLLP!,-A!K%,40!LLLQ!C!H2+09%2105!"::J("G(>O
- K%,40!LR!C!H2+09%2105!":#"(JG(>O

Emissions limits were defined for the same initial set of pollutants as for road vehicles, with separate limits for different categories of engine defined by their power rating. The Stage I emissions were for engine-out limits, i.e. to be achieved before any exhaust aftertreatment device might be fitted. Stage II added engines down to a net power rating of 18kW and tightened the limits for NO_x and PM. With the Stage IIIB standards, a PM limit of 0.025 g/kWh was introduced across all engine classes. This was designed to force the use of diesel particle filters. From Stage III onwards, the emission limits are defined for non-road diesel engines both for the indicated power range and for a small number of differentiated applications, i.e. rail and waterway engines, constant speed engines, and other NRMM engines (mainly off-road vehicles – the category of greatest interest for this chapter). Some of the latter (with a power rating between 56 and 560kW) are now subject to Stage IV standards which primarily tighten NO_x limits.

The emissions were initially measured on the ISO 8178 C1 8-steady-state mode cycle, also referred to as the Non-Road Steady State Cycle (NRSC), which is expressed in grams per kilowatt hours (g/kWh). The emissions are to be measured at eight steady-state load points defined by a combination of normalised engine speed and torque. The test is carried out on an engine dynamometer; that is, the engine is tested on a test bed, in a manner similar to that for engines of heavy duty road vehicles, but is not within the vehicle in which it is to be used. The test cycle is described in greater detail below.

With the Stage IIIB standards, in order to better represent emissions during real operating conditions, a new transient test procedure—the Non-Road Transient Cycle (NRTC)—was developed. The NRSC is still used for Stage I, II and IIIA testing, as well as for constant speed engines at all stages. The NRTC transient cycle can be used for Stage IIIA testing if the manufacturer chooses. Both NRSC and NRTC cycles are used for tests from Stage IIIB onwards for all engines apart from constant-speed engines.

A new Stage V emissions proposal is currently under development and is described below.

3.2. Real-World Emissions from NRMMs

3.2.1. The emissions test cycles for NRMMs – the NRSC and NRTC

Most NRMMs are subject to emissions measurements on both steady state and transient test cycles, similar to heavy duty road engines The test cycles are different for different machines in an attempt to match typical operating conditions. More details about the test cycles are available in Annex 4.

The driving schedule is composed of a series of engine load and engine speed configurations intended to reflect different operation modes of off-road machines; that is, every engine is tested over the same sequence that is intended to reflect all of the major applications in which it might be used, rather than the one in which any individual engine is actually used. Thus, the average obtained cannot be fully representative of any single application of the engine.

3.2.2. Real-world operation of non-road mobile machinery

In a project set up by the Austrian Ministry of Environment, engineers at TÜ Graz tested 17 off-road machines with a PEMS on-board measuring system [25]. During the tests, they performed operations representative of the real-world functions of each machine. The analysis of the engine load clearly showed that different machines during working operation operated in very different patterns and in very different areas of the engine map. Figure 13 shows the typical load points (defined by torque and engine speed) driven during the NRTC cycle set alongside the load points of different types of construction machines in real-world operation, as found in the tests.

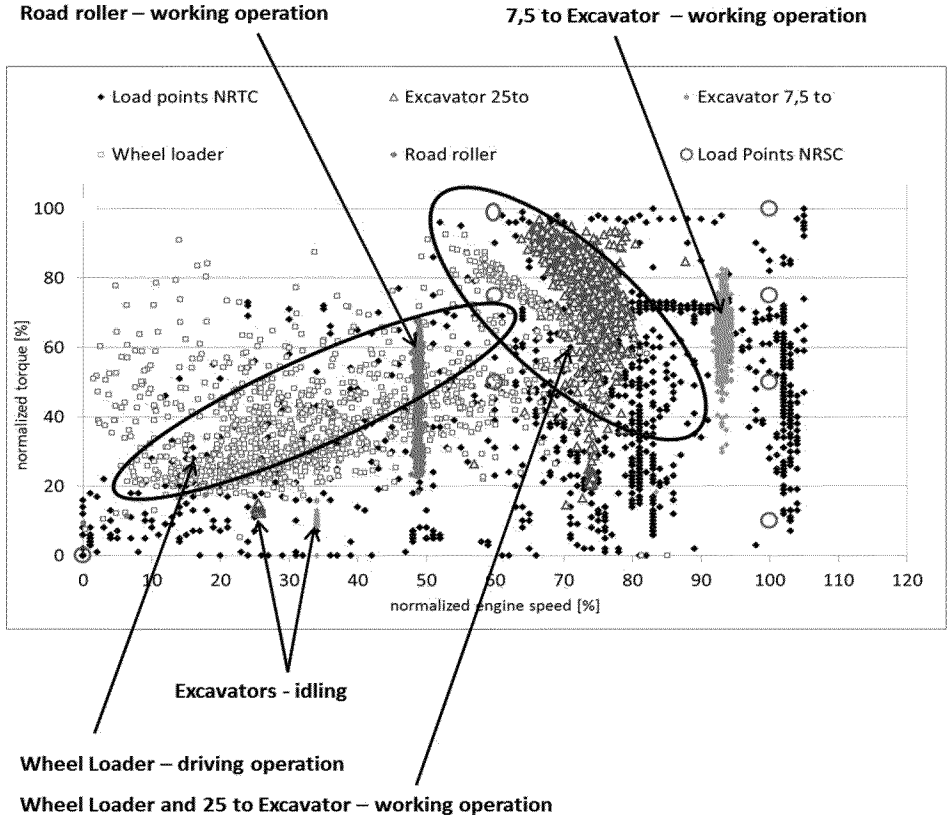

Figure 13. Example for load points in the NRTC and NRSC Cycles and in real-world operation

[25] Blassnegger J, Emission Factor Model for Construction Machinery Based on PEMS Tests, Institute of Internal Combustion Engines and Thermodynamics, Graz University of Technology, Inffeldgasse 19, A-8010 Graz, 20th international transport and air pollution conference, Graz, 2014

As Figure 13 illustrates, both the 7.5-tonne excava tor and the road roller (the yellow and orange dots , respectively) operate in a very small range of the engine map, and each operate at a constant, though very different, engine speed. The engine load did vary a t this working engine speed, but their load points fall in an area of the engine map with low rates of coverag e of either NRTC or NRSC load points.

The wheel loader runs very different operation mode s, such as mining crushed materials or driving on a road or track. Reflecting this, the load points of this machine cover a wide area of the total engine map, much of it within the area covered to some extent b y the NRTC and NRSC load points. The 25-tonne excavator also had a wide but more clearly defined operation, also largely within an area engaged by t he two test cycles.

Therefore, it is clear that the NRSC and the NRTC l oad points, as currently specified, are reasonably representative of some types of off-road machinery, but not all of them. The emissions measured by the se tests are not likely to be good reflections of rea l-world conditions. More PEMS tests should be perfo rmed to ensure compliance in real conditions of use, tog ether with strict binding limits that are not to be exceeded.

This is a problem specific to NRMM (over and above the more general issues highlighted in Chapter 2 regarding the NEDC of a rather sparse set of load p oints in most areas of the official tests). Once ag ain, this allows the possibility for engine operation to be o ptimised for outcomes other than low emissions in o ther parts of the engine map.

3.2.3. Real-world emissions from NRMMs

In the programme referred to above, real-world emis sions were measured from a range of off-road mobile machines, with a range as representative as possibl e also across the different emissions control limit s from Stage I to Stage IIIB. Owing to the timing of the tests, no Stage IV machines were able to be tes ted. For some pollutants, such as CO, the progress has b een significant, though the emission limit has stagnated for the last few cycles (Figure 14).

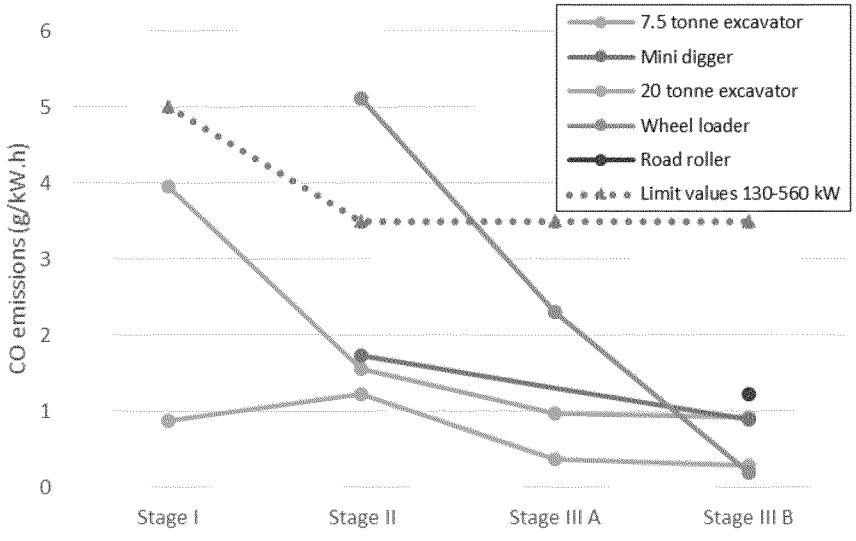

Figure 14. Average results for all tested machines for carbon monoxide (CO)

The picture is less clear for NO_x, and the real life emission values are very close in often exceeding the limit value (Figure 15).

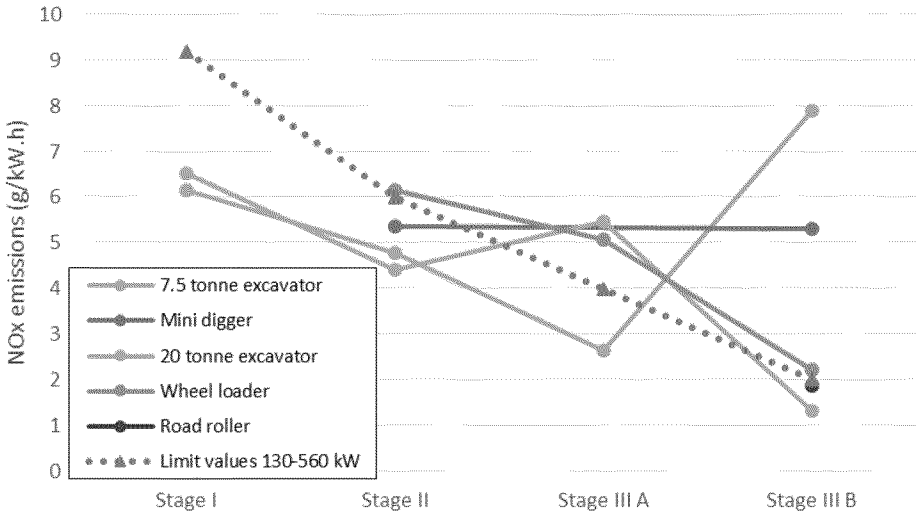

Figure 15. Average results for all tested machines for nitroge n oxides (NO_x)

While some classes do show improvements in line wit h the indicative limit value, others do not. Moreov er, this does not give confidence that the much more st ringent Stage IV and proposed Stage V standards wil l be met by machines used in real-life use patterns. Even though similar engines do meet stricter limits in the heavy duty road sector, NRMMs are still equippe d with older, cheaper technologies that emit a lot of air pollution.

Given the clear evidence that the test cycles are n ot adequately representative of all classes of mach ine operation, it is safe to suggest that there may be a real-world emissions problem for NRMMs analogous to that for on-road diesels.

3.3. The Commission's new proposals

In September 2014, the European Commission proposed Stage V emissions regulations for NRMMs in order to rectify some gaps in regulatory coverage a nd tighten some limits which had become outdated and no longer reflective of the current state-of-th e-art technology. For some classes of NRMMs, new emission stages were last introduced when the Direc tive was amended in 2004. The proposals are intended to realign EU emissions standards with US emissions standards where relevant.

The proposal introduces a number of important chang es, including:

- Widening of the scope of regulated engines to fill some notable gaps in coverage This is accomplished by including compression ignition (CI) engines below 19 kW and above 560 kW and spark ignition engines above 19 kW;
- Lowering the emission limits for some engine catego ries, such as engines of 19-37 kW and engines of inland waterway vessels;
- Adopting particle number (PN) emissions limits for several categories of CI engines, as has already been done for road vehicles;
- Further lowering NO_x limits;
- Introducing new requirements for in-service monitor ing as well as increasing data transparency.

These all appear to be sensible developments, ones which are largely in line with those for on-road vehicles. However, the proposal does not suggest an y enhancements to the test cycles and only indirect ly addresses the issue of real-world emissions. The la ck of ambition of the Commission proposal should be addressed by:

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- ∞ Harmonising emissions limits of NRMM engines with t he ones for heavy-duty trucks; the latest technologies should also be adopted by NRMM.
- ∞ Ensuring level playing field among machine types an d highest benefit in terms of emission reduction by setting a PN limit for those categorie s that are currently lacking one (large constructions machines, diesel locomotives and smal ler inland shipping vessels)
- ∞ Not favouring specific fuel types by allowing highe r emission limits: higher HC limits for natural gas engines are not technology-neutral and should be removed. Natural gas engines can enter the market only if they are as cl ean as other engines types.
- ∞ Having only one date for entry into force of all en gine types: Entering into force on 1 January 2019 leaves sufficient lead-in time given t he fact that technology is already available from other markets, in other modes, or in other countries.
- ∞ Making sure the existing fleet also cleans up: deve lop a retrofit strategy similar to what happened in Switzerland for tunnelling and construc tion machines. When engines need replacement, make sure the new engines meet the lat est emissions limit in place.
- ∞ Reforming the test procedure to better reflect real -life operating conditions: more realistic test cycles would allow the delivery of better emis sions performance where and when it matters.

3.4. Possible improvements to NRMM emissions testing

3.4.1. Improving the test cycles

Analogous to the work described above to develop th e WLTC for cars and vans, improving the test cycles in use to better reflect the real-world operations of NRMMs would bring real-life emissions down drastically.

As outlined above, the actual working engine speed of the machinery in use is not currently well refle cted in either the NRSC or NRTC. Therefore, for the futu re it would be important to better characterise the duty cycle of NRMMs and to embody that in the legislatio n. This would also be a way to improve the emission s of non-road vehicles in real life, as there would b e a stronger incentive for manufacturers to optimis e emissions for actual working load conditions rather than the (often unrepresentative) load points from the test cycles.

3.4.2. In-service conformity

The Commission has included in its recent proposals for Stage V limits that a programme of in-service monitoring checks be developed and undertaken using PEMS equipment in real-world operating conditions. The in-service monitoring proposed does not include any not-to-exceed (NTE) values, and therefore only exists to provide information to leg islators. This would ideally lead to a conformity f actor (as for road vehicles) that would be legally bindin g, so that machine and engine manufacturers work on reducing the emissions under realistic duty cycles.

In view of the diversity of the machinery covered b y this legislation, and also of the results shown a bove, this programme must be comprehensive in terms of co verage. Such a programme should be used to build up a database of real-world emissions factors for a ll major types of NRMMs in order to inform future a ir quality management strategy. Access to raw datasets should also be granted to any interested third parties to better understand the testing conditions and performance of the machines.

3.5. Outlook for NRMM: stopping the rise in emissions sh are

Several fronts need to be engaged to reduce emissio ns from NRMMs and reduce NRMMs increasing share of emissions. Specific policies to address this inc lude:

1. More representative test cycles that cover the oper ating points of the most popular machines;

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2. Measuring real-life emissions using PEMS equipment and linking those measurements to binding limits at type approval;
3. Ensuring that the engines are fitted with the best available technologies by setting ambitious emissions limits similar to those for other modes, such as heavy duty road vehicles;
4. Transparently providing data to third parties in order to have independent analysis of the emissions under real-life measurements.

4. Tackling air pollution at an EU, national, and local level

This section discusses the solutions to the problems described in the report. There are many remedies available to manufacturers and policy makers at an EU, national and local level which used in combination will lower pollution levels in hotspots and resolve outstanding issues. Technology has a key role to play – but so does regulation, to ensure that technology is deployed effectively.

4.1. Solutions and issues with abatement technologies

The evidence suggests that diesel NO_x can be reduced significantly with existing technologies that are on the market today. **Selective catalytic reduction (SCR)** can deliver low NO_x emissions, especially when combined with other abatement technologies such as EGR and/or LNT. Nonetheless, carmakers are reluctant to fit SCR to all vehicles because of the added cost (up to €500) and instead continue to utilise less effective and cheaper technologies, perpetuating the NO_x problems. When SCR is fitted, it is frequently not properly optimised to work under all normal driving conditions. This is because such optimisation would require regular filling of the urea reagent, a task that could increase the purchase and maintenance costs of a diesel car and add a level of inconvenience, thus potentially discouraging consumers from choosing diesel. The solution to this is an ambitious RDE package, with conformity factors of one, implemented before the end of the decade. In the absence of clean diesel cars, other actions will be inevitable to tackle the problems, such as a ban on diesel cars in city centres.

Ultrafine particles are another serious public health concern. Modern diesels are now fitted with a diesel particulate filter (DPF) to trap exhaust emissions, and retrofit programmes are possible, particularly for heavy duty vehicles and NRMMs. The evidence suggests that DPFs are effective in substantially reducing the volume and number of particulate emissions—even for the ultrafine $PM_{2.5}$ – in real-world driving conditions, especially for heavy duty engines. However, concerns are being raised regarding the effects of catalyst regeneration, which is presently excluded from the RDE test. This is a topic for future research, along with extending the scope of RDE tests to include regeneration events.

DPFs have a given lifetime and will fail and require replacement in the course of a vehicle's life. Sometimes the filters are also deliberately removed to improve performance and fuel economy. An effective system of regular inspections by member states is needed to check that particulate filters are still present on vehicles for which they have been mandated and are working correctly. This is not presently in place, but should be. It should also be illegal to remove such systems, not just to drive a vehicle that has been tampered with.

Modern gasoline direct injection engines also produce fine particulates that can be trapped with an equivalent gasoline particulate filter. [26] These are cheaper and simpler than diesel equivalents as the exhaust gases are much hotter, so elaborate regeneration provisions are not needed. The RDE test must be extended to measure PN from GDI engines. An effective test will ensure the fitting of a GPF, thereby resolving the issues.

[26] http://theicct.org/controlling-gdi-particulate-emissions

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4.2. Non-road mobile machines (NRMM)

Similar systems of exhaust treatment are also effective for NRMM, but for this category of vehicles testing systems remain very basic. Specifically, test cycles for NRMM do not properly reflect the real-world use of machinery. A programme of real-world testing of machines using PEMS equipment – as tentatively suggested by the Commission - should be developed in order to establish the scale of the real emissions and develop solutions that will ensure that real-world emissions are controlled and reduced across the whole spectrum of non-road mobile machinery. This will entail developing a database of all the available evidence and then putting in place legally-binding limits that will ensure real-life performance of NRMMs.

4.3. Further actions at the EU level

Air quality problems cannot be resolved exclusively by action at an EU level – but inadequate actions by the EU make resolving problems impossible, both nationally and locally (without draconian steps).

4.3.1. The World Light Duty Test Cycle for pollutant emissions

The work on the WLTC/WLTP is ongoing at the time of writing, but it is scheduled to be introduced into EU legislation from 2017.

The new WLTC driving cycle is far more realistic and dynamic than the former NEDC, with higher accelerations and maximum speeds. It also covers a far larger area of the engine map, making it more difficult to avoid applying emissions reduction strategies in real-world conditions. The main road load issues that will be addressed and improved by WLTP are to take proper account of the slope of the test track, mandate better and more rigorous vehicle preparation, and use a more representative test vehicle (e.g. in terms of vehicle mass and inertia).

At present, work on introducing WLTP is focused on measuring CO_2 emissions. This must be urgently extended to cover all air pollutants. Furthermore, correlation factors between the NEDC and WLTP results need to "translate" the current emission limits in to new ones applicable for the WLTP. For example, limits under the WLTP would be lower for some pollutants because the cold part of the test would be proportionally less important. The switch to WLTP must not lead to any dilution of the current Euro 6 standards.

An alternative approach would be to end laboratory testing for air pollution as part of type approval entirely and instead use a system of real-world testing.

4.3.2. The Real Driving Emission regulation

The future RDE (Real Driving Emission) legislation for Europe is scheduled to come into force on the 1st of January 2016, and it will first be introduced as a monitoring phase without limit values. It is anticipated from 2017 onwards, new models coming onto the market must meet 'not-to-exceed' (NTE) binding limit values that will be defined on the basis of Conformity Factors (CFs) that specify the ratio of measured emissions to the corresponding Euro 6 limit value. Setting conformity factors of 1 for all pollutants measured under the RDE is the only way to drastically reduce the excesses of NO_2 concentration around Europe. Such a CF should be implemented as soon as possible, well before the end of the decade, so that emission reductions accelerate from the mid 2020s as new vehicles enter the fleet.

In RDE tests emissions are measured using PEMS equipment in normal conditions of use. The test methodology has been agreed upon but there is uncertainty regarding how this test will perform in practice. For example, there remain doubts concerning the rigor and consistency of data normalisation tools (CLEAR and EMROAD). Additionally, the current tests underrepresent cold start driving, effectively omitting regeneration events and failing to measure all regulated pollutants. These concerns must be urgently addressed.

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4.3.3. Conformity checking in the EU

The introduction of real-world tests is a crucial s tep forward in resolving air pollution problems fro m vehicles, but it is not a panacea. Tests will still be conducted during type approval processes on pre - production vehicles, leading to the risk that manuf acturers highly optimise their test vehicles. To ad dress this limitation, additional checks must be performe d to ensure that production vehicles meet similar performance levels and maintain those levels of per formance. It is therefore necessary to supplement type approval tests with:

1. Conformity of production checks conducted on vehicl es chosen at random off the production line in order to verify that their emiss ions do not vary (beyond an agreed margin) from the official values; and
2. In-use testing to be conducted in order to ensure t hat real-world emissions do not vary too far from the official values, similar to the NT E tests undertaken in the US or what is now proposed for the RDE regulation. This should al so be extended to vehicles in use some years into their operational lifetimes. Furthe r details are provided below.

4.3.4. A robust approach to testing

The current system of testing lacks transparency an d independence as manufacturers select and pay for the services of national Type Approval Authorities and testing services that compete for business in a European market. This contributes to a lack of cons istency in the way that tests are performed. Creati ng an overarching European Type Approval Authority wou ld bring a level of independence to the system. Manufacturers should pay a levy on each new car sol d that would be used to finance independent testing . Charging 20 Euros per new vehicle sold would raise around 250 million Euros annually to fund such a system and would simply replace the costs currently being incurred. Such a system would be more efficient, as it reduces the number of type approva l authorities and cuts down on duplication of servi ces.

The creation of a European Type Approval Authority should be accompanied by a substantial increase in random/targeted testing from vehicles taken from th e production line to check for the conformity of production (called the Selective Enforcement Audit –SEA). These tests would make use of PEMS-based measurement to better reflect real-world driving co nditions.

Having an ambitious surveillance program – random c hecks of vehicles straight off of the production li ne or off of the road after some years of usage would create a major incentive to make vehicles comply un der most testing conditions. The EU should find a susta inable and independent financing mechanism to give life to such a programme.

4.3.5. Periodic technical inspections (PTI)

Designing tests on production vehicles that are bot h rigorous and independently-conducted is the only way to ensure that new vehicles' exhaust emissions really are clean and reduce the burden of air pollution. However, there remains a legacy problem with the existing fleet that strengthening the syst em of periodic vehicle inspections undertaken in membe r states must address. For example, the tests will need to verify that SCR and particle filters are fu nctioning correctly throughout the life of the vehi cle.

PTI could be strengthened by setting an expiration date for the type approval certificate. This would ensure that older, more polluting vehicles get scra pped or used to a very limited extent beyond a give n age. For example, a vehicle could only be permitte d to continue in use beyond (say) 15 years if it me ets modern Euro standards. If it does not meet those st andards after the 15-year period, it cannot be on Europe's roads. In practice this would not be viabl e for most aged vehicles that would be scrapped aft er 15 years. An exemption could be made for low-mileag e heritage vehicles that may continue to be used so

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long as they were driven for less than (say) 1500 km per year. An adequate transition period could avoid the initial substantial scrappage of older vehicles; for example, by permitting current owners to continue using their cars, but forbidding them from selling them.

4.3.6. Euro 7 / VII

This report has demonstrated that Euro 6 is failing to reduce real-world vehicle emissions and improve air quality. There is little doubt that the proposals outlined above will go some way towards improving the situation. However, loopholes and uncertainties remain, and new problems will undoubtedly be exposed. Euro 6 should not be considered the end point of vehicle regulation but Euro 7/VII legislation proposed.

Euro 7 legislation for cars should end the different emissions permitted for diesel, gasoline and natural gas. The legislation should ensure these limits are met in locations throughout Europe including cold northern latitudes; at altitude and on roads with steep gradients. Limits for both cars and trucks (Euro VII) should be set at a level that ensures WHO could be met across Europe – even in heavily trafficked locations.

Discussions on the new Euro 7/VII standards would also be a good opportunity to improve the EU testing architecture as suggested earlier.

4.4. National measures for tackling air pollution emissions

A first and simple step member states can make to help reach their national air pollution targets is to support the Commission's proposals to tighten the type approval procedure by including national RDE provisions. Doing so member states with infringement procedure for breaching air pollution limits will reduce the risk of future fines.

Secondly, nearly all EU member states tax diesel fuel more lightly than petrol in spite of diesel's higher energy density. Many countries are also favouring the purchase of diesel cars through CO_2–based vehicle taxation policies. Such policies have contributed to the dieselisation of the car fleet with new diesel car purchases now outnumbering those for new petrol cars. The larger the proportion of diesel cars on the road the more air quality problems persist. Member states should recognise the higher air pollution emissions of diesel cars in vehicle taxation policies. A more comprehensive system of vehicle labelling that includes both CO_2 and pollutant emissions would also spur a positive change to what defines a "clean car". Labelling dedicated for vehicles that meet more ambitious emissions limits (as is developed in the EULES program in DG Environment) would incentivise both national and local authorities to require such cleaner vehicles in their fleet and encourage their presence on their roads.

Third, owing to the very long duration of the diesel NO_x problem in particular, there are many diesel cars with high real-world emissions already on Europe's roads, and natural turnover will not remove these cars from Europe's vehicles fleets for many years. Member states should therefore consider whether retrofit programmes or limiting registration of used vehicles based on their environmental performance could effectively accelerate the removal of high-pollutin g vehicles (both light- and heavy-duty) from vehicle fleets. Retrofitted particulate filters, especially for heavy-duty applications, may be beneficial in some contexts, but care would need to be taken to ensure that any such programmes are sufficiently well-targeted and effective.

4.5. Local measures

Local measures to manage traffic or emissions are an essential complements to national and EU action on vehicle emission to address problems in air quality non-attainment. Too often local measures are

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neglected and poor air quality persists. A very wid e range of measures is available to local authoriti es that would reduce traffic, restrict access to the most p olluting vehicles, and achieve modal shift such as:

- **Cleaning up municipal fleets -** Most local authorities run or manage substantial fl eets of vehicles for a wide range of purposes. These fleets operate intensively in their respective local areas and therefore can have a substantial impact on local ai r quality. At the same time, many vehicles in these fleets undertake relatively short journeys in the course of the day, and so are depot-based. As such, many of these vehicles are likely to be su itable for substitution with electric or plug-in hybrid vehicles, or other low emission solutions, t hrough their vehicle procurement programmes.
- **Tackling buses and taxis** - These vehicles operate intensively in town and c ity centres, and in many cases are old vehicles with high emissions. Lo cal authorities tend to have a high degree of influence over these vehicles as they are often the owners, licensors, and/or commissioners of them. As such, local officials often have the autho rity to specify that only low emission vehicles may be used in their fleets. Again, the vehicles' m odes of operation are often suitable for the use of electric or hybrid technology, and equipping fle ets with such technology can dramatically reduce the level of emissions in the town or city c entre. An EU fund could help trigger investment in retrofit programmes and help local authorities t o "electrify" their fleets.
- **Pedestrianisation or restriction of vehicular acces s** - Another effective option for reducing emissions in the town or city centre is to create a reas in which all or virtually all vehicular access is restricted, either permanently or during working ho urs. This type of approach offers a wide variety of benefits beyond just better air quality, such as improving the urban environment, encouraging walking and cycling, favouring the local economy, e tc.
- **Restricting access for high-emitting vehicles** - Local officials generally have the authority to specify which vehicles may enter their town or city centre. Therefore, they could consider establishing a -low emission zone (LEZ), which woul d ban or restrict the worst polluters. France released a categorization scheme for light duty veh icles in which Euro 6 diesels are not in the cleanest vehicle category[27].
- **Establishing goods transshipment centres -** An important source of traffic in most town and cit y centres is the delivery of goods to commercial prem ises. This is typically undertaken by vans and heavy trucks with diesel engines, both of which are substantial sources of emissions. An alternative pioneered in a few municipalities has b een to establish transshipment points at which goods are transferred for the 'last mile' of delive ry to smaller and less polluting vehicles, often hybrid vans or even fully-electric vehicles.

Many examples of these and other types of local sus tainable transport initiatives can be found on the website www.eltis.org. This website was created by merging the best-prac tice case studies from the eltis.org and mobilityplans.eu to develop a single, all-encompassing urban mobility observatory.

4.6. Concluding remark

Each year the evidence and estimates of the numbers premature deaths and widespread illness caused by air pollution grows. The problems are predominantly in urban areas and vehicles, especially diesels th e dominant source. Once emerging evidence of the effe ct of nitrogen dioxide are factored into health assessments it is likely 500-750 thousand people wi ll die annually in the EU – equivalent to wiping ou t the population of Frankfurt each year.

It is entirely avoidable as the technology to clean up exhausts works and is available and costs a few hundred Euros. It is a small price to pay and much less than the hundreds of billions of euros spent i n health care and lost output and productivity. Ever y legislative proposal to tackle the problem meets

[27] http://www.developpement-durable.gouv.fr/Un-certificat-qualite-de-l-air,43566.html?var_mode=calcul

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resistance for carmakers anxious to minimise their costs, have unrestricted car access to all areas and
preserve the EU market for diesels. This opposition to tackling emissions perpetuates our polluted air.
Cars with engines must be clean or prevented for accessing polluted cities. Citizens deserve the right to
clean air wherever we need to breathe.

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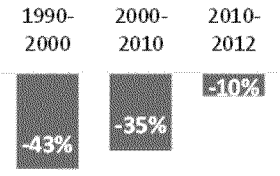
Annex 1

Main pollutants that are harmful for human health, part 2

Carbon Monoxide (CO)

Change in Emissions

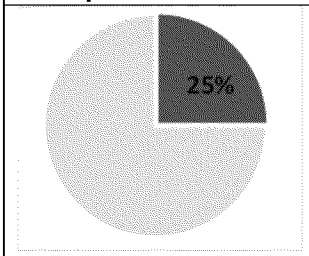


Sources: CO can be formed during the burning of any carbon-rich compound where there is insufficient oxygen available to oxidise all the carbon to CO ". In internal combustion engines (ICEs). engines (especially petrol ones, this occurs through the incomplete combustion of the carbon in the fuel when the fuel:air ratio is high. Road transport used to be the main source of atmospheric CO, but has declined substantially over the past two decades.

Health Impacts: In high concentrations, CO is lethal, although not at the concentrations encountered in ambient air. However, chronic exposure can give rise to symptoms including tiredness, lethargy, headaches, nausea, dizziness, personality changes, and memory problems.

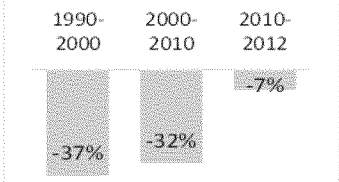
It is particularly likely to adversely affect those with pre-existing illnesses, especially angina and coronary artery disease.

Transport Share in 2012



Volatile Organic Compounds (VOCs)

Change in Emissions

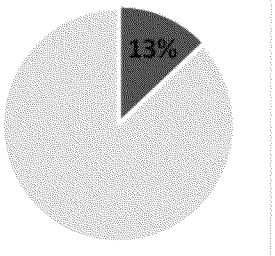


Sources: This is a very large group of compounds formed by unburnt or partially burnt fuel, or by fuel evaporation. It is found particularly in vehicle exhaust.
Methane, forms the vast majority of VOCs and is indirectly responsible for the creation of ozone.
Solvents and other industrial processes are the largest source of non-methane VOCs (NMVOCs) overall.

Health Impacts: A very wide range of substances fall in this category. Health effects can include eye, nose, and throat irritation; headaches; loss of coordination; nausea; and, at high doses, damage to the liver, kidney, and central nervous system. Respiratory, allergic, or immune effects can also be triggered in children who are more susceptible. Some VOCs, including benzene, are also known carcinogens.

VOCs also react with NO_2 to form ozone in the lower atmosphere, which is another common air pollutant that is detrimental to human health.

Transport Share in 2012



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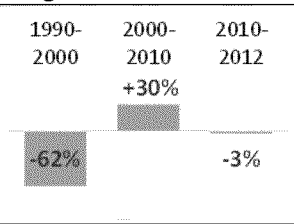
Benzo(a)pyrene (BaP) - Non Regulated	
Change in Emissions	**Sources:** BaP is an example of a polycyclic aromatic hydroca rbon (PAH) that originates from incomplete combustion of fuels . Main sources include wood and waste burning, coke and steel prod uction, and motor vehicle engines. In particular, BaP is found in diesel exhaust.
	
Health Impacts: BaP can cause irritation of the eyes, nose, or thr oat; breathing problems; irritation, inflammation, and infections of the lungs; asthma; reduced lung function; and lung cancer. It is also mutagenic in that metabolytes of BaP can react dire ctly with DNA molecules and distort their structure.	

Source: EEA and WHO various documents

Note: Data on sources are incomplete for BaP

Annex 2 Regulation of air pollution in Europe

The WHO Guidelines

The World Health Organisation (WHO) has the remit o f assessing the emerging evidence on the adverse health effects of air pollution and establishing sa fe levels of pollutants that countries should aim t o achieve. These are set out in the WHO Guidelines, w hich state that air of an acceptable quality is a fundamental human right.

On the basis of the available evidence, the WHO rec ommends guideline values for both the maximum safe concentration of each pollutant and the safe durati on of exposure. A chemical may cause acutely damaging effects after peak exposure for a short pe riod irreversible or incapacitating effects after prolonged exposure to lower concentrations, or both . A time of exposure as short as an hour or less ma y be specified for acute pollution, and typically a y ear of exposure reflects prolonged exposure.

EU air quality legislation

The WHO Guidelines are only a guide, and thus have no legal force. Therefore, the EU has gone further in setting mandatory limit values that require the mem ber states to stay under limits for certain polluta nts through its Air Quality Framework Directive and a s eries of 'daughter' Directives dealing with the individual pollutants.

In most cases, the limit values set at EU level fol low the WHO guideline values; but, as they are mand atory, they are set at limits that are deemed to be achiev able without excessive cost or effort on the part o f the nember states. In a few cases, this results in EU l imits that are less stringent than those establishe d by the WHO.WHO limits remain the mid-term air quality targ et and would have to be reached by 2030 across Europe. As can be seen from the numbers in brackets in Table 4 below, the annual limit values for PM in the WHO guidelines are significantly stricter than the current EU limit values. In certain cases, a li mited number of exceedances of the limit may also be allo wed.

The main limits for relevant pollutants are summari sed in Table 4 below.

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Pollutant	Concentration	Averaging period	Legal nature	Permitted exceedences each year
Fine particles ($PM_{2.5}$)	25 $g/m^3 **(10)** **	1 year	Target value entered into force 1.1.2010 Limit value enters into force 1.1.2015	n/a
Nitrogen dioxide (NO_2)	200 $g/m^3	1 hour	Limit value entered into force 1.1.2010	18
	40 $g/m^3	1 year	Limit value entered into force 1.1.2010*	n/a
PM_{10}	50 $g/m^3	24 hours	Limit value entered into force 1.1.2005	35
	40 $g/m^3 **(20)** **	1 year	Limit value entered into force 1.1.2005	n/a
Lead (Pb)	0.5 $g/m^3	1 year	Limit value entered into force 1.1.2005 (or 1.1.2010 in the immediate vicinity of specific, notified industrial sources; and a 1.0 $g/m^3 limit value applied from 1.1.2005 to 31.12.2009)	n/a
Carbon monoxide (CO)	10 mg/$m^3	Maximum daily 8 hour mean	Limit value entered into force 1.1.2005	n/a
Benzene	5 $g/m^3	1 year	Limit value entered into force 1.1.2010	n/a
Polycyclic Aromatic Hydrocarbons	1 ng/$m^3 (expressed as concentration of Benzo(a)pyrene)	1 year	Target value enters into force 31.12.2012	n/a

*Under Directive 2008/50/EC the member states can apply for an extension of up to five years (i.e. maximum up to 2015) in a specific zone. The request is subject to assessment by the Commission. In such cases, the limit value applies at the level of the limit value plus an agreed maximum margin of tolerance within the time extension period.

** Figures in brackets are WHO guideline values that differ from EU standards

Source: European Commission

Table 4. Summary of EU limit values

The EU air quality monitoring network

In order to establish whether EU limit values are being met across the EU, the member states have been required to construct a network of monitoring stations with equipment designed to continuously measure the levels of all of the main pollutants, including those for which limits have been set. There are now over 2500 stations in the network, although the exact number varies from year to year and for different pollutants.

Stations are categorised into three types, according to their location and the pollution sources that they measure:

1. **Background** stations can be in urban, suburban, or rural areas; they are located away from major sources of emissions in order to indicate the general level of pollution in an area or country;
2. **Industrial** stations are located close to major emitters of pollutants, either in industrial areas or major points of concern such as power stations;
3. **Traffic** sources are located close to busy roads where vehicle emissions are at their highest.

The results of this monitoring are reported to the European Environment Agency, which produces regular reports on progress in cleaning up our air [28].

[28] The latest being http://www.eea.europa.eu//publications/air-quality-in-europe-2014

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National Emissions Ceilings (NECs)

In 1999, the then-EU member states, together with o ther members of the UNECE, negotiated the 'multi-pollutant' protocol under the Convention on Long-Ra nge Transboundary Air Pollution (the so-called Gothenburg Protocol). The commitments under the Pro tocol are translated into EU law by the National Emissions Ceilings Directive (NECD). This sets out limits for national emissions of the four pollutant s responsible for acidification, eutrophication, and ground-level ozone pollution (sulphur dioxide, nitr ogen oxides, volatile organic compounds, and ammonia),al l of which are also implicated in local air quality problems. The NECD led to significant cuts in emiss ions up to 2010, but now needs to be amended to focus more on human health by introducing a ceiling for $PM_{2.5}$ and short-lived climate pollutants (black carbon and methane) in line with the 2012 amendment s to the Protocol. Objectives including national ceilings must also be extended to 2020, 2025, and 2 030. The EU Commission has released a revision of t he NEC directives as part of the Clean Air Package whi ch is likely to set more ambitious Emission Reducti on Commitments (ERCs) until 2030. However, the Commiss ion proposal is not ambitious enough: the 2025 emission limits should be made binding, and ERCs sh ould reach the 75% gap closure by 2030, as defined to be the most cost-effective by the EU Impact Asse ssment.

Source regulations: EU emission limits on cars, vans and other sources

In order to bring about improvements in our air qua lity, **emission limits** are imposed on the most important sources of emissions of a particular poll utant. Increasingly sophisticated monitoring and modelling exercises have been undertaken in order t o evaluate which sources of pollution are most important and how much their maximum or average emi ssions should be required to be reduced in order to improve air quality in the most effective and co st-effective way possible (see below).

For most of the common pollutants, emission limits are typically imposed on some or all of the followi ng main sources:

1. Power stations
2. Other large industrial plants
3. Cars and vans
4. Heavy duty vehicles
5. Non-road machinery

Cars and vans have been regulated by a steady seque nce of tightening limit values, starting with Euro 1 in 1991 and continuing most recently with Euro 6, whic h is coming into force between September 2014 (for new vehicle types) and September 2015 (for all vehi cle types). These Euro standards limit all of the m ain pollutants from vehicle exhausts: carbon monoxide, nitrogen oxides, particulates, hydrocarbons and, volatile organic compounds from evaporation. Exhaus t pollutant emissions limits are summarised in Table 5 below. Even though emission limits have bee n tightening over time, the manner in which they ar e measured is obsolete and needs to be deeply revised to better reflect real-life emissions, as describe d in the main report.

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Euro Stage	Year of entry into force for new models*	CO	HC	$HC+NO_x$	NO_x	PM	PN
		g/km					number/km
Compression Ignition (Diesel)							
Euro 1	1992	2.72	-	0.97	-	0.14	-
Euro 2	1996	1.0	-	0.7	-	0.08	-
Euro 3	2000	0.64	-	0.56	0.50	0.05	-
Euro 4	2005	0.50	-	0.30	0.25	0.025	-
Euro 5a	2009	0.50	-	0.23	0.18	0.005	-
Euro 5b	2011	0.50	-	0.23	0.18	0.005	6.0×10^{11}
Euro 6	2014	0.50	-	0.17	0.08	0.005	6.0×10^{11}
Positive Ignition (Petrol/Gasoline, LPG, CNG, etc)							
Euro	1992	2.72	-	0.97	-	-	-
Euro 2	1996	2.2	-	0.5	-	-	-
Euro 3	2000	2.30	0.20	-	0.15	-	-
Euro 4	2005	1.0	0.10	-	0.08	-	-
Euro 5	2009	1.0	0.10	-	0.06	0.005[a]	-
Euro 6	2014	1.0	0.10	-	0.06	0.005[a]	6.0×10^{11} [a]
Notes:							
* models already in production must comply typic ally around one year later a applicable only to direct injection engines							

Table 5. EU Emission Standards for Passenger Cars

As this table illustrates, petrol engines and diese l engines are both subject to separate and sometime s different limits that are slowly converging, reflec ting the technical potential for emissions reductio ns and the willingness to harmonise regulation to achieve technology-neutral fuel policies. This has involved some trade-offs; for example, diesel vehicles have more stringent CO standards but are allowed higher NO_x emissions. For both engine types and for all of th e compounds regulated, emissions limits have tightened considerably over more than two decades o f EU vehicle emissions regulation. For example, the diesel car limit for carbon monoxide fell from 2.72 g/km to 0.5g/km between Euro 1 and Euro 6 (a reduct ion of 82%) and for particulates from 0.14g/km to 0.005 g/km (a reduction of 96%).

For heavy-duty trucks, which are dominated by compr ession ignition engines, emission limits have tightened in a similar trend but are expressed in a different unit (g/kWh instead of g/km). Recent emp hasis has been put on particulate emissions and on reduci ng NO_x levels, which are difficult to control during the compression ignition combustion process and need to be post-treated in the exhaust line (Table 6).

Euro Stage	Year of entry into force for new models*	CO	HC	NO_x	PM	PN	
		g/kWh				number/kWh	
Euro I	1992	4.5	1.1	8	0.36	-	
Euro II	1996	4	1.1	7	0.25	-	
Euro III	2000	3.775	0.72	5	0.13	-	
Euro IV	2005	2.75	0.505	3.5	0.025	-	
Euro V	2008	2.75	0.505	2	0.025	-	
Euro VI	2013	2.75	0.13	0.43	0.01		7E+11

Table 6. Table NN: Heavy duty emission limits

Non-Road Mobile Machinery (NRMM) is also subjected to emissions limits that are engine-specific. Limits depend on application type, engine power, and fuel/ ignition type. Progress has been slower on NRMM engines, so such engines are in a position to benefit from leapfrog off of the technological progress made in other modes of transport.

The EU infringement procedures on air pollution

A formal procedure has been put in place to sanction member states that do not respect EU law. This is the case for air quality regulatory limits, and the EU Commission has initiated infringement proceeding against more than half of the member states. Seventeen member states are currently not respecting the PM10 regulatory limit, and one (the UK) is also being prosecuted for NO_2 limit exceedances [29]. When the process reaches the court ruling, member states are exposed to very heavy financial fines which are intended to provide sufficient incentive to put in place ambitious air pollution mitigation policies.

Bringing it all together – EU air quality strategy

All of the above form essential components of the European air quality management system, but how do we know that the limits we set on emissions are sufficient to meet the air quality targets that we set ?

All of the above form essential components of the European air quality management system, but how do we know that the limits we set on emissions are sufficient to meet the air quality targets that we set ?

The European Economic Community (as it was) first enacted legislation on vehicle emissions limits in Directive 70/220/EEC, but the first major milestones were Directive 91/441/EEC, which effectively required catalytic converters on all new petrol cars, and Directive 94/12/EC, set second stage limits (Euro 2) and separate limits for diesel cars. These measures were, however, hotly contested by the motor industry, consequently a more integrated and holistic approach was developed under the two Auto Oil

[29] http://legal.cleanair-europe.org/legal/eu/infringement-procedure/

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Programmes and the subsequent Clean Air for Europe (CAFE) initiative, which culminated in further legislation in 2008. These sought to set subsequent standards on the basis of the most cost-effective approach to meeting air quality standards across Europe through new limits on a range of sectors, including motor vehicles. This was therefore was a deliberative process whereby future emissions limits were meant to be linked to the attainment of the air quality objectives.

In particular, CAFE envisaged a 60% reduction in NO_x emissions by 2020 relative to the year 2000 and a 59% reduction in primary $PM_{2.5}$. This objective in turn gave rise to the new regulation in 2007 that set the standards for Euro 5 and Euro 6 for cars and vans, requiring significant cuts in NO_x and PM emissions. For example, the Euro 5 limit represented an 80% cut in the $PM_{2.5}$ standard for diesels relative to the Euro 4 limit, while Euro 6 required a 68% cut in diesel NO_x from Euro 4. The shortcomings and failures of these emission limits will be covered later in this report.

Annex 3 - Evidence of the growing gap between test limits and real-world emissions

Background

There is now a wealth of evidence indicating exceedances of Euro limit values under real-world driving conditions. This 'gap' between the regulatory limit and real-life emissions has developed over a period of time, and this annex focuses mainly on the gap for cars and vans approved against the current Euro 6 standard. It also focuses especially on NO_x emissions from diesel cars, as this is where the gap between the regulatory limit and real-life emissions appears largest. These are of the most acute concern, together with particulates from gasoline direct injection engines.

Will Euro 6 reduce the NO_x emissions of new diesel cars? Insights from on-road tests with Portable Emissions Measurement Systems (PEMS), M. Weiss et al., paper published in Atmospheric Environment 62, p.657-665, August 2012

On-road tests with a PEMS system were carried out on one Euro 6 diesel vehicle and six Euro 4-5 diesels The tests were carried out on four different test routes designed to reflect typical on-road driving. These results must be taken merely as an indication since only one Euro 6 vehicle was tested.

Their route average NO_x emissions showed that the respective standards were exceeded by 164% for the Euro 6 vehicle, 294% for Euro 5, and 204% for Euro 4 vehicles. The on-road NO_x emissions for the Euro 6 vehicle were on average 0.21 g/km, which is substantially lower than the Euro 4 and Euro 5 vehicles (at 0.76 and 0.71 g/km, respectively) but still almost three times over the Euro 6 limit.

Handbook on Emission Factors for Road Transport, INFRAS, July 2014, http://www.hbefa.net

The HBEFA is based on measurements from more than a thousand cars spanning from the Euro 0 period to Euro 6 period. The relevant data clearly show that NO_x emissions from diesel cars did not drop significantly between Euro 0 and Euro 5, and at some stages even became worse. Furthermore, much more of the NO_x was emitted as primary NO_2 under Euro 3, 4, and 5, making its impact on the quality of air in the immediate vicinity of traffic even worse.

In this case, Euro 6 emissions were found to be much lower, but it is thought that this may be a result of the fact that only 9 diesel car models were available on the market when the testing was undertaken and most of them were from the premium vehicle segment. It is assumed that these early Euro 6 cars were designed to have lower real-world emissions since the OEMs were well aware of the high probability that independent labs would measure the emission levels of these vehicles in great detail. As argued above, it is likely that most production line Euro 6 cars will have higher NO_x levels as long as there is no supplementary legislation to deal with on-road measurements.

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For vehicles with PI (petrol or gasoline) engines, the results suggest that more attention will need to be paid in the future to the real-world particle number (PN) emissions. Figure 16 shows the test results for the Euro 5 gasoline cars in the hot start CADC (of which about 40% had direct injection). Most vehicles exceeded the future Euro 6c limit of 6×10^{11} particles per km. Since a cold start increases the PN emission levels further (as do high engine loads and transient driving conditions), real-world PN performance is expected to become an issue for PI cars in future.

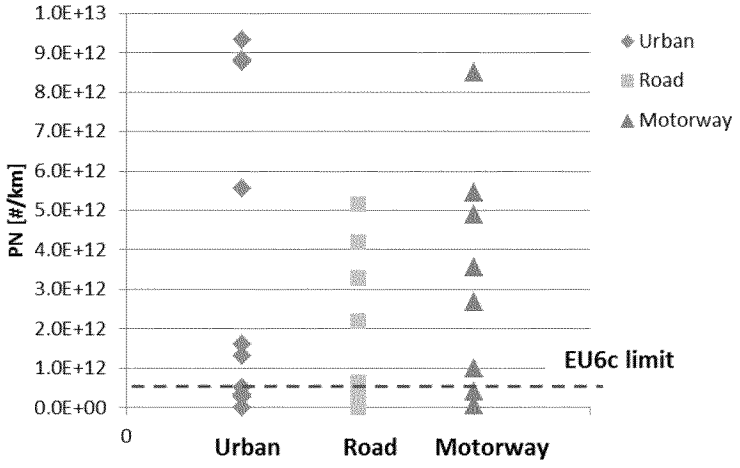

Figure 16. Particle number emissions from Euro 5 gasoline cars in the CADC test cycle according to the ERMES database (status 2012/2013). Each point is the test result of a single vehicle.

Investigations and real world emission performance of Euro 6 Light-Duty vehicles, N. Ligterink et al., TNO report 2013 R11891, December 2013
And
Detailed investigations and real-world emission performance of Euro 6 diesel passenger cars, Gerrit Kadijk et al, TNO 2015 R10702, May 2015

For these study divided on 3 phases, TNO reported data on 16 diesel passenger vehicles. four of these were prototypes (either pre-production Euro 6 or aimed at the US market) and twelve were Euro 6 type-approved. The vehicles were tested on the NEDC and on real-world driving cycles on a chassis dynamometer, and more intensively on many different routes using PEMS and SEMS

The general conclusion of this report was that the real-world CO, THC, and PM emissions of the tested vehicles fell within the Euro 6 limits, but NO_x emissions on a realistic driving cycle were on average more than 6 times higher than the Euro 6 NO_x limit. In on-road measurements, emissions reached 7-10 times above the limit (Figure 17).

Real-world NO_x emissions also varied enormously. In effect, the NO_x performance of Euro 6 diesel vehicles was found to be at a similar level as that of Euro 4 and 5 diesel passenger cars, despite the fact that the limit has been reduced from 250 mg/km for Euro 4 to 80 mg/km for Euro 6.

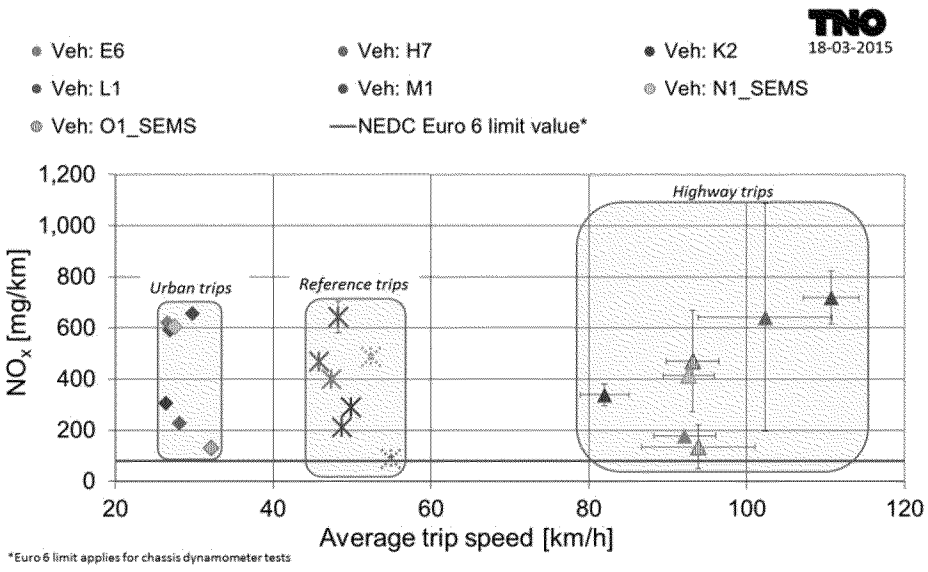

Figure 17. Euro 6 PEMS tested vehicle at TNO, 2013 and 2015

The vehicles tested in this study were among the first to meet the Euro 6 standard. Once Euro 6 is mandatory for all new vehicles on the market, it is expected that other (cheaper) abatement technologies may be used for smaller cars in particular, and these potentially will demonstrate poorer emissions reduction performance than the vehicles tested.

Real-world Exhaust Emissions from Modern Diesel Cars – a Meta-Analysis of PEMS Emissions Data from EU (Euro 6) and US (Tier 2 Bin 5/ULEV II) Diesel Passenger Cars, V. Franco et al., the ICCT, White Paper, October 2014

This analysis by the International Council on Clean Transportation (ICCT) is the most comprehensive source found for on-road measurements, as it incorporates results for fifteen Euro 6 vehicles tested for their real-world emissions using PEMS.

In the tests, the Euro 6 diesel cars were found to have low on-road emissions of carbon monoxide (CO) and total hydrocarbons (THC), which were generally within the Euro 6 type approval limits. In contrast, the on-road emissions of NO_x was very high for these vehicles, with emissions averaging 7 times the limit value and with only 10% of the averaging periods below the Euro 6 limit (Figure 18).

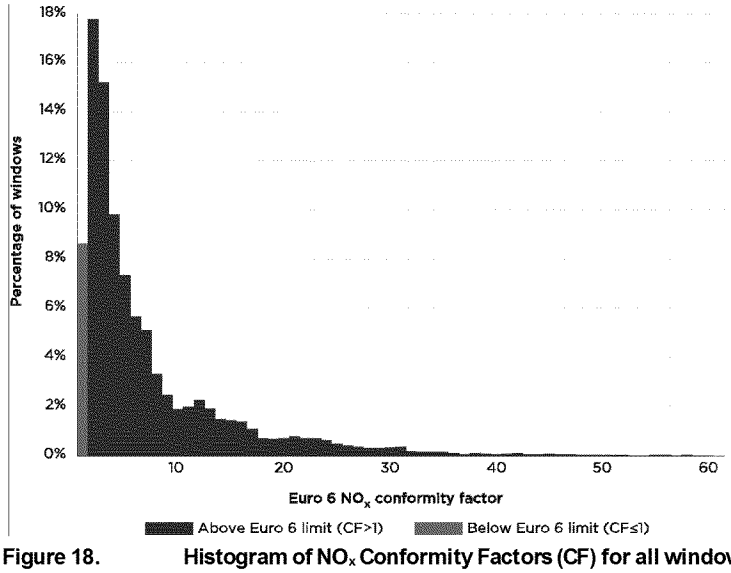

Figure 18. Histogram of NO_x Conformity Factors (CF) for all windows (source: ICCT - Mock, 2014)

Further analysis of the results suggests that higher NO_x emissions may be expected from more demanding test cycles in the future, and there were remarkable differences in the emissions performance of the tested vehicles. Only one of the tested vehicles was equipped with a lean NO_x trap (LNT) and 10 were equipped with selective catalytic reduction (SCR). The vehicle with LNT had the second highest NO_x emissions, and the vehicle with the lowest emissions had SCR.

ADAC position on the NO_x emissions of state-of-the-art diesel cars, positioning paper by ADAC, 02.19.7001 – 28275 – STAND 10-2014, 2014

In this study, a total of 18 Euro 6 diesel cars with different emissions reduction technologies were tested by German motoring organisation ADAC in the laboratory on three different test cycles. The NO_x emissions of Euro 6 diesel cars were found to vary greatly between different driving cycles, as can be seen in Figure 19.

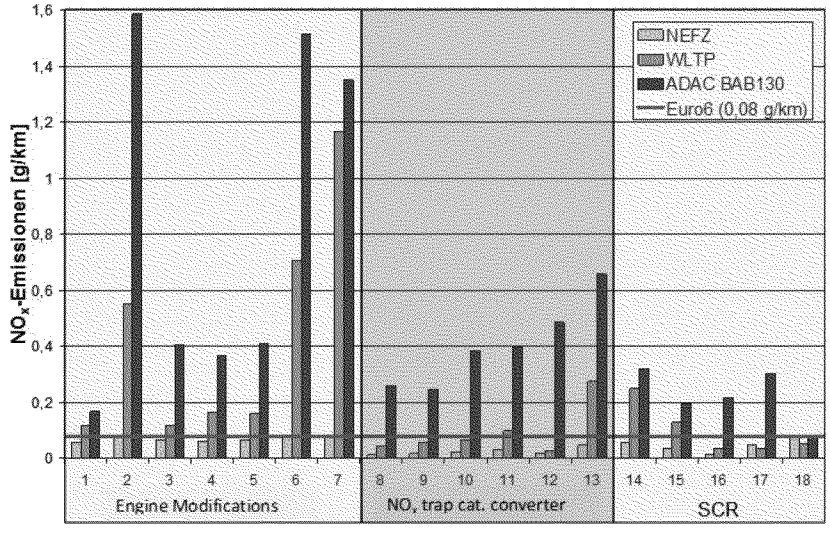

Figure 19. NO_x emissions of 18 selected Euro 6 diesel passenger cars over the NEDC (NEFZ), WLTP and ADAC test cycles [ADAC 2014]

The results illustrate that SCR technology has the potential to reduce NO_x significantly on any driving cycle, provided that it is well-calibrated. It also shows that almost all of the Euro 6 diesel cars currently available on the market cannot reproduce the same low-NO_x emission performance from the NEDC on more realistic driving cycles such as WLTC and ADAC Ecotest, and especially not in non-urban traffic conditions. This is related to the absence of harsh accelerations in the NEDC and the associated high engine loads. The ADAC Ecotest contains motorway driving with full-throttle sections, which clearly highlights the differences in the NO_x-reducing potential of the Euro 6 technologies. Engine modifications with no aftertreatment performed particularly poorly in these conditions. On the WLTC, the NO_x emissions were also generally higher, though never to the same extent as on the ADAC test. In general, the Euro 6 vehicles with only engine modifications show the highest emissions in real-world cycles, followed by the lean NO_x catalyst. The SCR technology had the best overall NO_x performance in all test cycles used.

PEMS-Messungen an drei Euro 6-Diesel-Pkw auf Streckenführungen in Stuttgart und München sowie auf Außerortsstrecken, Werner Scholz et al, March 2015

3 Vehicles with different post treatment technologies have been extensively PEMS tested, on different routes. In-depth data analysis has been performed, for example to highlight the NOx instantaneous emission on a Engine speed vs power map, versus the time epnt for each engione point for type approval

test cycles (NEDC, and WLTC). This shows the inadeq uacy of the type approval test to capture high NOx emissions events (Figure 20).
Report is only available in German.

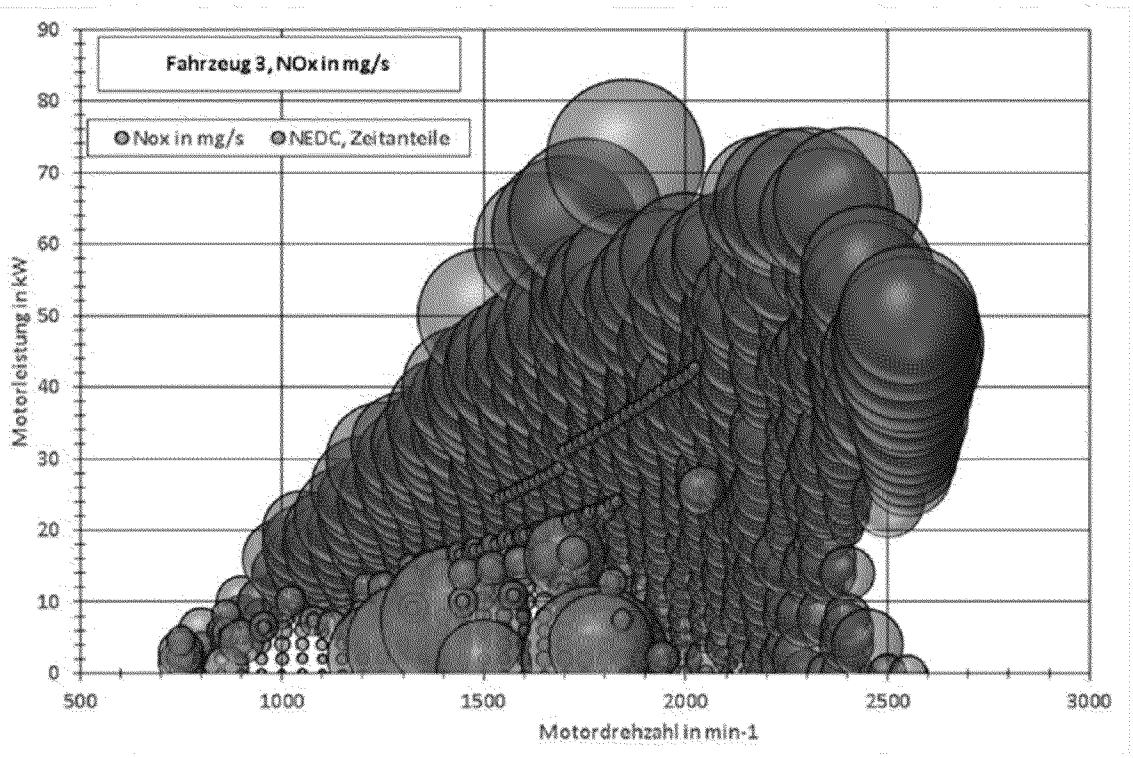

Figure 20. **NO_x emission events on the engine speed vs power map c ompared with operation points on the NEDC**

Where do Euro 6 cars stand? Presentation from Emiss ion Analytics at the AECC RDE conference, Nick Molden, April2015

Emission Analytics has extensive experience with PE MS measurements, and has tested more than 800 vehicles over the years, primarily for real-life CO_2 emissions measurements.
Additional measurements on some pollutant have been added over time, and more than 25 Euro 6 cars have PEMS-tested and NOx measured over the same rou te that is kept confidential in order t oavoir optimization from manufacturers.
The route is nonetheless not very demanding, with l imited slopes and high speed events. Overall , only 3 vehicles tested by Emission Analytics meet the NOx legal requirement in real-life conditions, and aver age exceedances factor exceeds 4.5 times the legal limi t. Emission Analytics nevertheless recently noticed an improvement of more recent vehicles tested (Figure 21), that would need to be confirmed with future tests, especially as all vehicles will have to comp ly to Euro 6 as of September 2015.

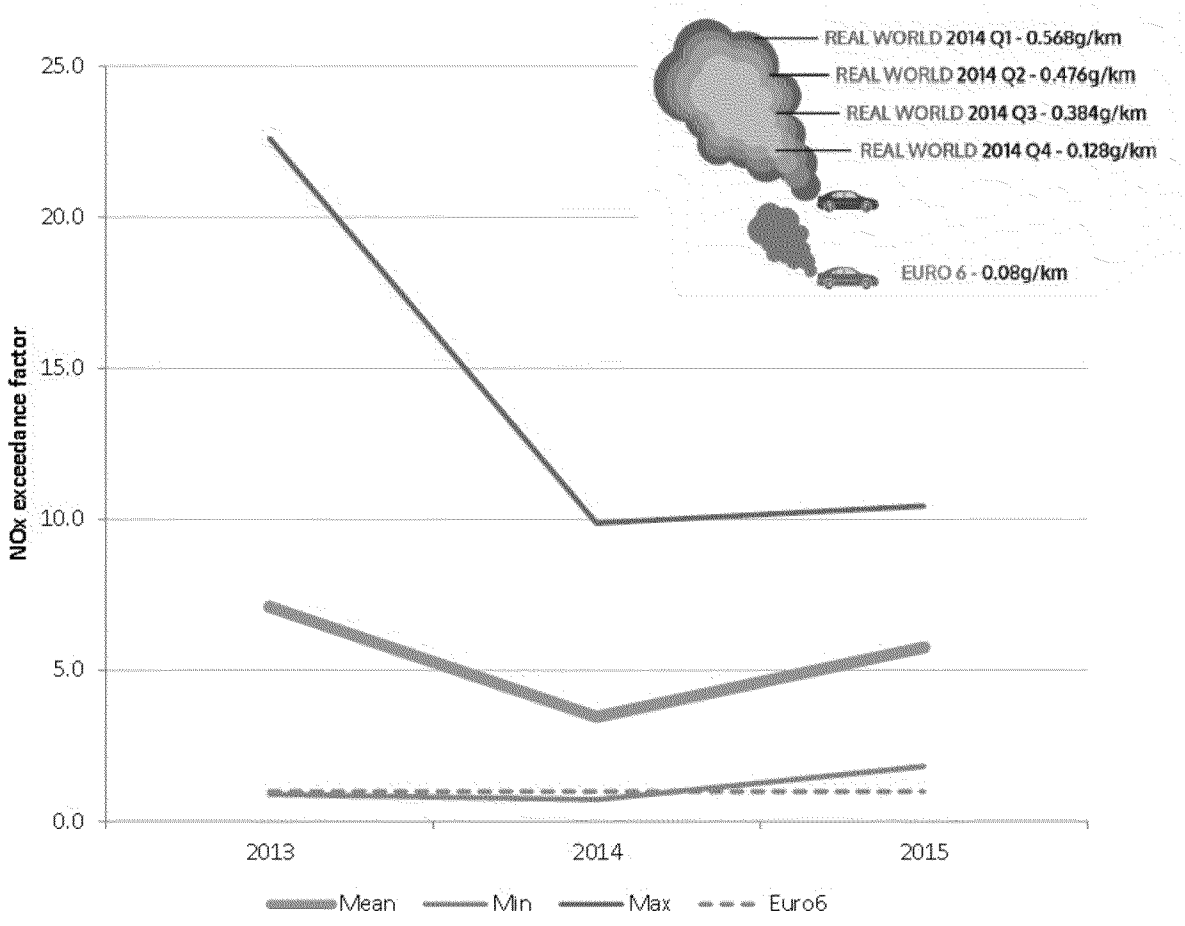

Figure 21. Latest trends of Euro96 NOx PEMS teste results

Conclusions from recent evidence on the real-world emissions gap

The evidence on Euro 6 emissions is still developing, as the standards do not yet apply to all new cars, but some clear conclusions are emerging.

1. Most of the evidence shows limited reductions in real-world diesel NO_x emissions over the whole of the period subject to the Euro limit values, in spite of ever-tighter test limits.
2. More of the real-world NO_x is being emitted as primary NO_2, thereby accentuating the impacts on air quality close to roads with heavy traffic.
3. There is growing evidence that this problem can be resolved by applying good quality selective catalytic reduction (SCR) aftertreatment to diesel engines, but cheaper solutions such as LNTs and engine modifications alone are much less effective.
4. For cars with PI (petrol or gasoline) engines, the evidence suggests that they are now well able to meet Euro standards in real-world conditions for most pollutants, including NO_x. There is concern that particle numbers (PN) are well above the limits for Euro 6, but particle filters are capable of dealing with this problem in a cost-effective manner.

Annex 3 – Test Cycles for Non-Road Mobile Machinery

The ISO 8178 is an international standard and includes a collection of steady-state engine dynamometer test cycles designated as type C1 (commonly referred to as the NRSC and used in the EU for off-road

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vehicles), D1 (for constant speed engines), and oth ers. These are designed for different types of applications and apply different weighting factors to the various engine modes within the test (define d by normalised engine torque and speed) to reflect, to the extent possible, the different use patterns of broad classes of machines. However, the load points and w eightings are the same for all off-road vehicles; s o, for example, the differentiation of the load patterns i s quite crude.

The NRTC test is a transient driving cycle for mobi le non-road diesel engines, developed by the US Environmental Protection Agency (EPA) in cooperatio n with authorities in the EU. The cycle has a total duration of 1238 seconds and is a transient driving schedule. It is run from both a cold start and a h ot start, with an engine soak temperature stabilised a t between 20 and 30°C, as for the current NEDC test for road vehicles. The cold start results have a weight ing factor of 10% in the EU and 5% in the United St ates, reflecting the fact that these machines tend to be operated continuously for long periods and hence th at cold starts are not a large influence on average em issions.

Table 7 below shows the particular engine modes of the different engine applications used in the NRTC.

NRTC (Nonroad Transient Cycle)								
Application Number	Nonroad Application	Application Duration (seconds)	Application in Cycle Position (#seconds)	Segments from Application Cycle (#seconds)	Segment Name	Segment Duration (seconds)	Cumulative Cycle Time (seconds)	Segment in Cycle Position (#seconds)
					Start/Transition	28	28	0-28
1	Backhoe Loader	206	29-234	52-86	Roading	35	63	29-63
				108-141	Trenching	34	97	64-97
				174-218	Loading	45	142	98-142
				351-442	Grade/Level	92	234	143-234
2	Rubber-Tire Loader	184	235-418	746-822	Typical Operation	77	311	235-311
				531-637	Hi-Spd Transient	107	418	312-418
3	Crawler-Dozer	209	419-627	85-206	Road Bed Prep	122	540	419-540
				376-462	Clearing	87	627	540-627
4	Agricultural Tractor	150	628-777	265-414	AgTractor	150	777	628-777
5	Excavator	35	778-812	319-338	LowerHp (128Hp)	20	797	778-797
				431-445	HigherHp (208Hp)	15	812	798-812
					Transition	3	815	813-815
6	Arc Welder	204	816-1019	1007-1103	Typical Operation	97	912	816-912
				544-650	Hi-Spd Transient	107	1019	913-1019
7	Skid Steer Loader	185	1020-1204	264-365	Typical Operation	102	1121	1020-1121
				150-232	Hi-Trq Transient	83	1204	1122-1204
					Idle/Transition/End	34	1238	1215-1238

Table 7. Allocation of NRTC Test Cycle modes to machinery cl asses

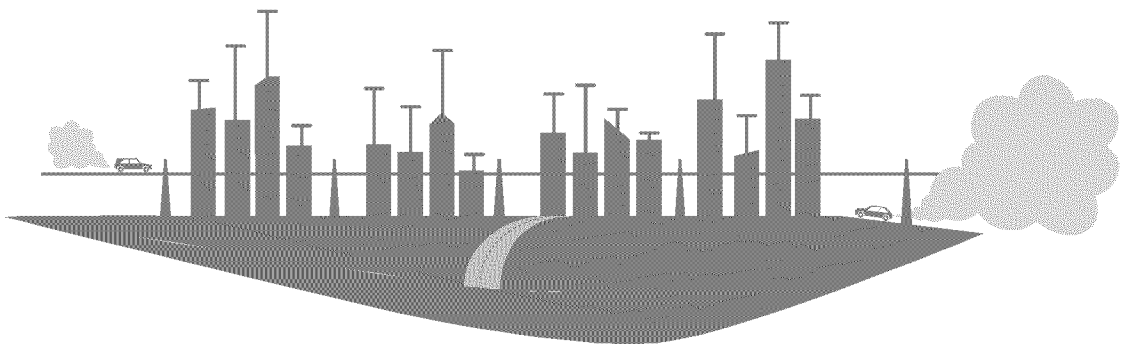
The load points for both NRSC (red circles) and NRT C (black dots) are illustrated in Figure 13 in Sect ion of the main report.

white paper SEPTEMBER 2015

NO_x control technologies for Euro 6 Diesel passenger cars

Market penetration and experimental performance assessment

Liuhanzi Yang, Vicente Franco, Alex Campestrini, John German, and Peter Mock



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Acknowledgements

the authors would like to acknowledge the *Allgemeiner Deutscher Automobil-Club* (ADAC) for providing the experimental data. We also thank all internal and external reviewers of earlier versions of this report for their guidance and constructive comments. special thanks go to Reinhard Kolke (ADAC), ray Minjares (iCCt), shaojun Zhang (university of Michigan, Ann Arbor), Martin Weiss (european Commission, DG Joint research Centre), Charles n. Freed, and the auto industry representatives who helped verify the vehicle sales data.

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Funding for this work was generously provided by the ClimateWorks Foundation and the stiftung Mercator.

executive summary

Controlling nitrogen oxides (NO_x) emissions from euro 6 diesel passenger cars is one of the biggest technical challenges facing car manufacturers. three main technologies are available for this purpose: inner-engine modifications coupled with exhaust gas recirculation (eGr), lean-burn NO_x adsorbers (also called lean NO_x traps, or Lnt), and selective catalytic reduction (sCr).

As of the full phase-in of the euro 6 standard in the european union in september 2015, all newly registered diesel passenger cars will have to meet a NO_x emission limit of 80 mg/km over the european light-duty vehicle emission certification cycle (new european Driving Cycle, neDC). While all diesel car manufacturers have managed to meet this requirement during the regulated laboratory test, it is widely accepted that the "real-world" NO_x emissions of diesel passenger cars are substantially higher than the certified limit. this was one of the main drivers behind the recent amendment of the euro 6 standard to require an on-road, real-driving emissions (rDe) test using portable emission measurement systems (PeMs) for the type approval of passenger cars in the eu. once rDe testing is legally enforced in 2017, passenger cars will have to demonstrate reasonably low emissions under conditions that resemble real-world use more closely than laboratory cycles (although some aspects, such as cold-start emissions and the effects of high-load driving, will not be fully captured). rDe testing will therefore pose additional challenges for diesel passenger car manufacturers in the eu. in the short run, it should lead to **more robust implementations of existing NO_x control technologies**—especially in terms of engine/aftertreatment calibration approaches—**but in some cases, it could also have a significant impact upon the hardware choices made by diesel car manufacturers. in the long term, rDe should also deliver substantial improvements in urban air quality in europe as fleet turnover makes pre-rDe diesel cars less prevalent.**

in this paper, we combine two automotive databases from reputable sources to report on the evolution of the market share of euro 6 diesel passenger cars and on the **relative shares of NO_x control technologies selected by car manufacturer in the EU during the phase-in of the Euro 6 standard** (2012–2014). We also compare the european diesel passenger car market to that of the us for context. Lnt and sCr are the most prevalent technologies for the control of NO_x emissions from diesel passenger cars in the european market. Lnt predominate for smaller applications,[1] although some manufacturers (e.g., Peugeot-Citroën) have chosen to apply sCr across the board. in the us market, the NO_x emission limit is even lower than 80 mg/km and the certification cycle (Federal test Procedure, FtP) is more transient and has somewhat higher loads. there, combined aftertreatment systems—better performing, but also more complex and expensive—are featured in some models that otherwise use a single NO_x control technology in their european market versions.

in order to provide some insights into the **relative performance of manufacturers and NO_x control technologies**, we analyzed the results of chassis dynamometer emissions tests performed by europe's largest car club, *Allgemeiner Deutscher Automobil-Club* (ADAC), as part of its own test program. these covered 32 euro 6 diesel passenger cars: 11 sCr-, 16 Lnt- and 5 eGr-equipped. the vehicles were tested over both the european

1 According to our data sources, they were found in 95% of Diesel euro 6 vehicles with engine displacements below 1.5 liters sold in the eu in 2014.

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type-approval cycle (NEDC) and Version 2.0 of the new, more realistic Worldwide harmonized Light Vehicles Test Cycle (WLTC) that is expected to replace the NEDC by 2017. The results indicate that **the implementation of NO_x control technologies by a few manufacturers is delivering acceptable results over both cycles**, whereas other manufacturers are mostly focusing on meeting the limit over the NEDC while neglecting real-world operating conditions, even on the relatively low-load WLTC. All vehicles tested by ADAC except one met the legislative limit of 80 mg/km NO_x over the (less demanding) NEDC cycle. Most EGR- and SCR-equipped vehicles performed better than LNT-equipped vehicles over the WLTC, but their average emissions were still far higher than those over the NEDC (by a factor of 2.3 for EGR-equipped vehicles and 2.8 for SCR-equipped vehicles). The same factor was 8.0 for the average of all LNT-equipped vehicles. **Three LNT-equipped vehicles exhibited very poor performance over the WLTC**, with one car emitting up to 1,167 mg/km NO_x (more than 15 times the regulated limit). This casts a shadow of doubt over the real-world performance of all current (pre-RDE) NO_x control approaches, especially those relying on LNTs, and underscores the importance of engine and aftertreatment calibration to realize the full potential of available technologies and achieve satisfactory real-world performance.

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Market share of NO_X control technologies for diesel passenger cars during Euro 6 phase-in (Section 2)

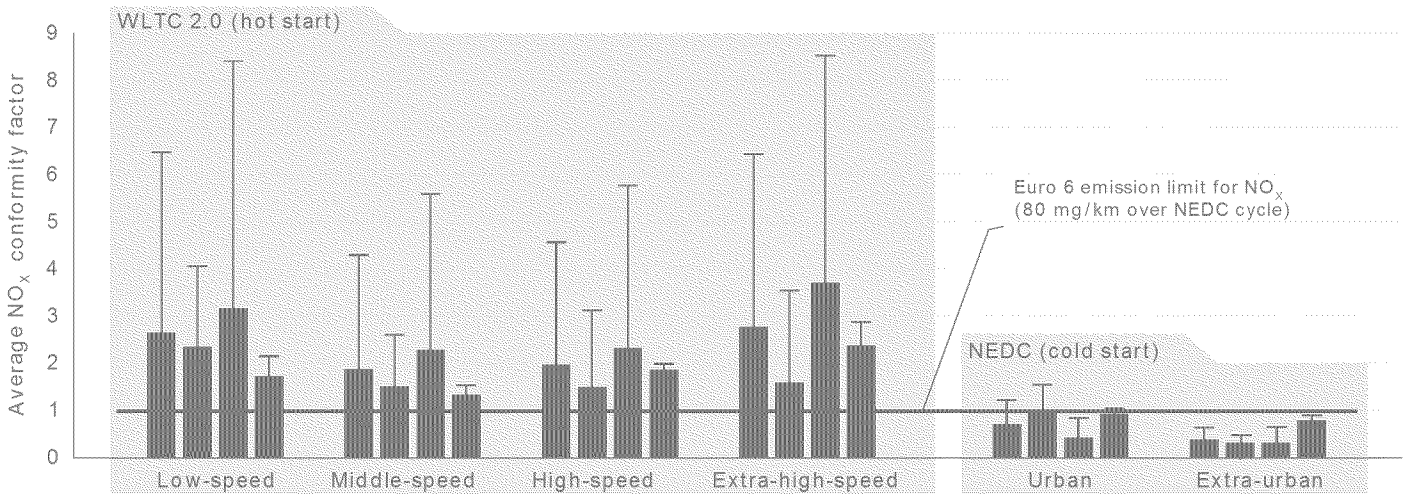
- SCR (Selective Catalytic Reduction): Better suited for high loads, requires diesel fluid (AdBlue™) refills
- LNT (Lean NO_X Trap): Better suited for low loads, some vehicles can have very poor results under realistic driving conditions
- EGR (Exhaust Gas Recirculation): Not specific for NO_X, proven technology with low cost and average NO_X control performance

NO_X emissions from diesel passenger cars during real-world driving are a major threat to urban air quality in Europe. A substantial part of the problem is related to a weak testing framework and insu cient monitoring and enforcement. An recent amendment to Euro 6 regulations (Real-Driving Emissions, RDE) could drive diesel cars with poor on-road performance out of the market.

The US diesel passenger vehicle market is much smaller than EU's (0.8% vs 53% of sales in 2014), and it is dominated by German manufacturers. We found striking di erences between the aftertreatment systems featured in US and EU vehicles, likely due to di erences in the emissions testing procedures (US cycle is more demanding, nominal emission limit is lower), enforcement programs (more robust in the US) and market composition.

NO_X emissions of 32 Euro 6 diesel passenger cars tested by ADAC on a chassis dynamometer cycle (Section 3)

NEDC: current EU emissions type-approval cycle (unrealistic low load, quasi-steady velocity profile)
WLTC: future (2017) EU emissions type-approval cycle (somewhat more realistic than NEDC)
Conformity factor (CF): ratio of measured emissions to the regulated emission limit (CF>1 indicates an exceedance)



- All vehicles (32)
- SCR (11)
- LNT (16)
- EGR (5)

(Numbers in parentheses indicate number of cars in the subset)

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AbbreviAtions

ADAC	*Allgemeiner Deutscher Automobil-Club*
CF	Conformity factor
CnG	Compressed natural gas
Co	Carbon monoxide
Co_2	Carbon dioxide
eCe-15	urban sub-cycle of neDC
eeA	european environment Agency
eGr	exhaust gas recirculation
ePA	environmental Protection Agency
eu	european union
eu-28	european union (covering 28 member states)
euDC	extra-urban Driving Cycle (extra-urban sub-cycle of neDC)
FtP	Federal test Procedure
g/km	Grams per kilometer
GDi	Gasoline direct injection
L	Liter
Lnt	Lean no_x trap
Mercedes	Mercedes-Benz
neDC	new european Driving Cycle
no_x	nitrogen oxides
PeMs	Portable emission Measurement system
ppm	Parts per million
rDe	real Driving emissions
sCr	selective Catalytic reduction
uneCe	united nations economic Commission for europe
us	united states
VW	Volkswagen
WLtC	Worldwide harmonized Light Vehicles test Cycle

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1. introduction

the first part of this paper (section 2) presents a detailed look at the market penetration of diesel euro 6 passenger cars in 2012–2014, the years corresponding to the phase-out of the euro 5 standard and the phase-in of the euro 6 standard. sales data[2] were crossed with a second database of the emission control technologies applied by the main european passenger car manufacturers in their diesel euro 6 offerings (ADAC, 2015a). these results offer insights into the different technological choices made by diesel car manufacturers to meet a common regulated target.

in the second part of the paper (section 3), we analyze the results of a series of emissions measurements performed by the German automobile club ADAC on 32 euro 6 passenger cars in a vehicle emissions laboratory as part of its test program (ADAC, 2015b). the emissions of these vehicles were measured over both the emissions certification cycle currently in use in the eu for light-duty vehicles (neDC) and the more realistic WLTC cycle. the results over the WLTC cycle, which is expected to replace neDC for regulatory use in 2017, are taken as a proxy of the real-world performance of the cars under test. the high NO_x emissions over this cycle suggest that control of NO_x emissions from euro 6 diesel passenger cars outside of the regulated cycle is generally insufficient, and they also reveal differences among the performance of both technologies and vehicle manufacturers.

1.1. NO_x CONTROL TEChNOLOgiES fOR EURO 6 COMPLiaNCE

the euro 6 emission standard sets the legal limit for NO_x emissions from diesel passenger cars at 80 mg/km (as measured over the neDC cycle).[3] the limit applies to all new type approvals of passenger cars in the eu as of september 2014, and is down from 180 mg/km for the euro 5 standard, which no longer applies for emissions type approval (transportPolicy.net, 2015). the transition from euro 5 to euro 6 has driven technological changes in the control of NO_x emissions from diesel cars to meet the lower emission limit, mostly in the form of dedicated exhaust after treatment systems. this effect will likely be amplified after the euro 6 regulations are officially amended to adopt real-driving emissions (rDe) testing with portable emissions measurement systems (PeMs). With this amendment (not yet published in the official Journal of the european union), eu passenger cars will have to demonstrate reasonably low emissions during conditions of use that resemble real-world use more closely than laboratory cycles.

in this section, we briefly introduce the main technologies available to vehicle manufacturers for the control of NO_x emissions from diesel passenger cars. to that end, table 1 presents an overview of the main technological options for the control of NO_x emissions from euro 6 passenger cars. the information from this table was synthesized from Bergmann, 2013; Franco, Posada, German, & Mock, 2014; Johnson, 2009, 2013; Lowell & Kamakaté, 2012; Majewski, 2007; Maunula, 2013; Posada, Bandivadekar, & German, 2012; Zheng, Reader, & hawley, 2004.

2 the data reported in this paper were synthesized from a number of commercial and public databases on vehicle registrations in the eu by vehicle variant available to the ICCT, 2014.

3 For new diesel passenger car registrations, the 80 mg/km limit will apply from september 2015 onward.

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Table 1: overview of the main technologies for the control of NO_x emissions from euro 6 diesel passenger cars

	Lean NO_x trap (LNT)	Selective catalytic reduction (SCR)	Exhaust gas recirculation (EgR)	Combined SCR and LNT (SCR+LNT)
Principle	NO_x is adsorbed onto a catalyst during lean engine operation. When the catalyst is saturated, the system is regenerated in short periods of fuel-rich operation during which NO_x is catalytically reduced	A catalyst reduces NO_x to gaseous nitrogen and water in the presence of ammonia. Most light-duty applications use an aqueous urea solution (diesel exhaust fluid, AdBlue™) as an ammonia precursor	A fraction of exhaust gas is rerouted to the combustion chamber to lower combustion temperature and the production of engine-out NO_x. For *high-pressure EGR*, exhaust gas is drawn from upstream of the turbine; for *low-pressure EGR*, exhaust gas is drawn from after the DPF. Both approaches can be used in combination	An sCr unit downstream of the Lnt allows higher NO_x conversion efficiencies as ammonia synthesized by Lnt reacts with NO_x on the sCr
Typical application	Light-duty vehicles with engine displacements below 2 liters (<2.0 L)	Light-duty vehicles with engine displacements above 2 liters (>2.0 L)	Widespread deployment from euro 3 to euro 6. the application of eGr and other NO_x control technologies is not mutually exclusive; sCr tends to be used in combination with eGr	Light-duty vehicles (high-end, larger vehicles)
Estimated cost per vehicle*	$320 (engines <2.0 L) $509 (engines >2.0 L)	$418 (engines <2.0 L) $494 (engines >2.0 L)	$142 (engines <2.0 L) $160 (engines >2.0 L)	
advantages	70-90% efficiency at low loads Good durability and NO_x reduction performance More economical for engines less than 2.0 L no additional reductant tank is needed (lower packaging constraints) reductant fluid not required (no refills needed)	up to 95% NO_x conversion efficiency More economical for engines > 2.0 L, may provide better fuel economy/lower CO_2 emissions	no additional onboard hardware is needed reductant fluid not required	Good NO_x control performance at low temperatures reductant fluid not required (in some configurations)
Limitations	NO_x storage capacity is limited by physical size of Lnt highway and uphill driving can overwhelm the capacity of Lnt, leading to high NO_x emission events For engines > 2.0 L, more frequent trap regeneration events are required, leading to additional fuel penalties (around 2%) Precious metal usage is high (approximately 10 to 12 g for a 2.0 L engine) NO_x adsorbers also adsorb sulfur oxides resulting from the fuel sulfur content, and thus require fuels with a very low sulfur content (< 10 ppm). sulfur compounds are more difficult to desorb, so the system has to periodically run a short "desulfation" cycle	Limited NO_x conversion at low-load driving conditions (vanadium catalyst), sensitive to fuel sulfur content (copper-zeolite catalyst) For light-duty vehicles, exhaust temperature during urban driving conditions is usually below 200°C, whereas the vaporization of urea into ammonia requires an exhaust temperature of at least 180°C requires additional urea distribution infrastructure (possibly periodic refills by user), on-board storage and heating, anti-tampering provisions, and injection systems (packaging constraints)	Most effective at low engine loads high real-world NO_x emissions during high load driving instances because the maximum applicable exhaust gas recirculation rate decreases with engine load trade-off between NO_x performance and fuel economy	high cost Packaging constraints (combined aftertreatment solutions take up more space than single-technology solutions) Calibration difficulties due to added complexity
application examples	VW Polo, VW Golf, BMW 2-series	Peugeot 308, Mercedes-Benz C200, Audi A5	Mazda 3, Mazda 6, Mazda CX-5	us market versions of BWM 3-series, 5-series and X5-series

*Cost estimates from Posada, Bandivadekar & German, 2012. Variable geometry turbocharging is assumed for eGr.

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2. mArket AnAlysis

in this section we perform an analysis of the european diesel passenger car market in the years 2012-2014, with special attention to the market shares of the different no$_x$ control technologies that we introduced in section 1.1. For the eu market analysis (covering the so-called eu-28, the union's 28 member states), we used the data sources that are also the basis for **iCCT's European Vehicle Market Statistics Pocketbook** (Mock, 2014) and ADAC's no$_x$ control technology data (ADAC, 2015a). us vehicle sales data from recent years are not available from official sources, so we used the sales data reported by hybridCars.com from 2012–2014 (hybridCars.com, 2015). nox control technology data by model in the us market were collected from the publicly available ePA Document index system database (us ePA, 2015).

2.1. DiESEL MaRkETS iN ThE EU aND ThE US

registrations were issued for about 12.5 million passenger cars in the eu in 2014. of these, 6.6 million (**53% of total EU sales**) were powered by diesel fuel (eeA, 2015). in the same year in the us, 16.4 million passenger vehicles were sold. of these, 7.7 million were classified as passenger cars, and the remaining 8.7 million were light trucks, including vans, pickups and sport-utility vehicles such as the Audi Q5, BMW X5 and Mercedes GL-Class (Auto Alliance, 2015). together, diesel cars (103,000 vehicles) and diesel light trucks (35,000 vehicles) accounted for just **0.84% of total US passenger vehicle sales** (hybridCars.com, 2015). these vehicles were certified to either tier 2 emissions standard, which can be considered more stringent than euro 6 in terms of nox emissions limits: most diesel passenger vehicles sold in the us comply with tier 2 Bin 5 limit of 50 mg/mi (31 mg/km, as measured over the FtP cycle).

in recent decades, sales of diesel passenger cars have steadily increased in the eu From 2006 to 2014, diesels have captured more than 50% of the market (eeA, 2014). in 2011, the eu market share of diesel passenger cars peaked at 55%, then dipped slightly to 53% in 2013 and 2014 (Figure 1, top). **Some EU countries, such as france, Spain, Belgium, and ireland, had diesel market shares ranging between 65% and 72%** (Mock, 2014). in the us, however, the passenger vehicle market is overwhelmingly dominated by gasoline offerings, and diesel passenger vehicles are much less prevalent—even less so than vehicles powered by alternative fuels and technologies, including hybrid vehicles, plug-in, battery electric, and CnG vehicles. (see Figure 1.)

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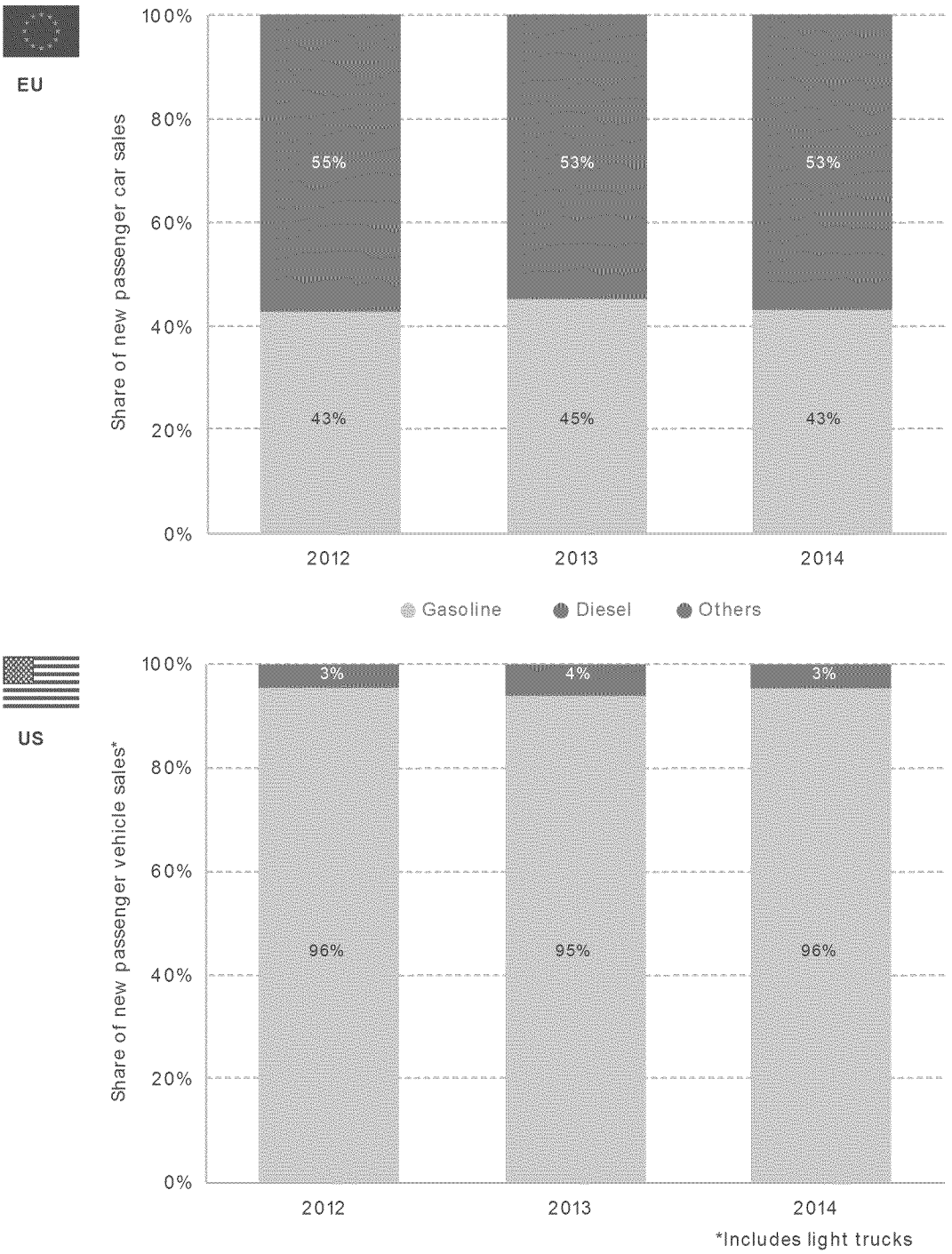

figure 1: Market shares of diesel, gasoline and alternative-fuel passenger vehicles in the eu and us, 2012–2014

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2.2. MaRkET PENETRaTiON Of EURO 6 DiESEL PaSSENgER CaRS

the euro 6 emission standard sets the legal limit for NO_x emissions (measured over the neDC cycle) at 80 mg/km. this limit is down from 180 mg/km for the euro 5 standard. As per the eu's usual practice for the introduction of euro standards, euro 6 first became mandatory (as of september 2014) for all *new vehicle type approvals* of passenger cars—i.e., for new vehicle types introduced to the market—while vehicles complying with an older standard could continue to be registered. From september 2015 onward, all *new vehicle registrations* of passenger cars will have to comply with euro 6—i.e., the standard will reach a 100% market share by 2016. For the purposes of our analysis, we will look at vehicle sales figures (which very closely mirror registrations) for 2012–2014, a period that covers the phase-in of euro 6.

in 2014, about **1 million Euro 6-compliant diesel passenger cars were sold in the EU-28**. in 2012, this figure was less than 100,000, which means the market share of euro 6 increased from 1% to 15% over three years as manufacturers gradually brought their euro 6 offerings to the market. At the same time, the market share of new passenger cars certified to the euro 4 standard or below dropped from 6% to nearly zero. euro 5 vehicles continued to account for the majority of vehicle sales, retaining an 85% market share for 2014 (Figure 2).

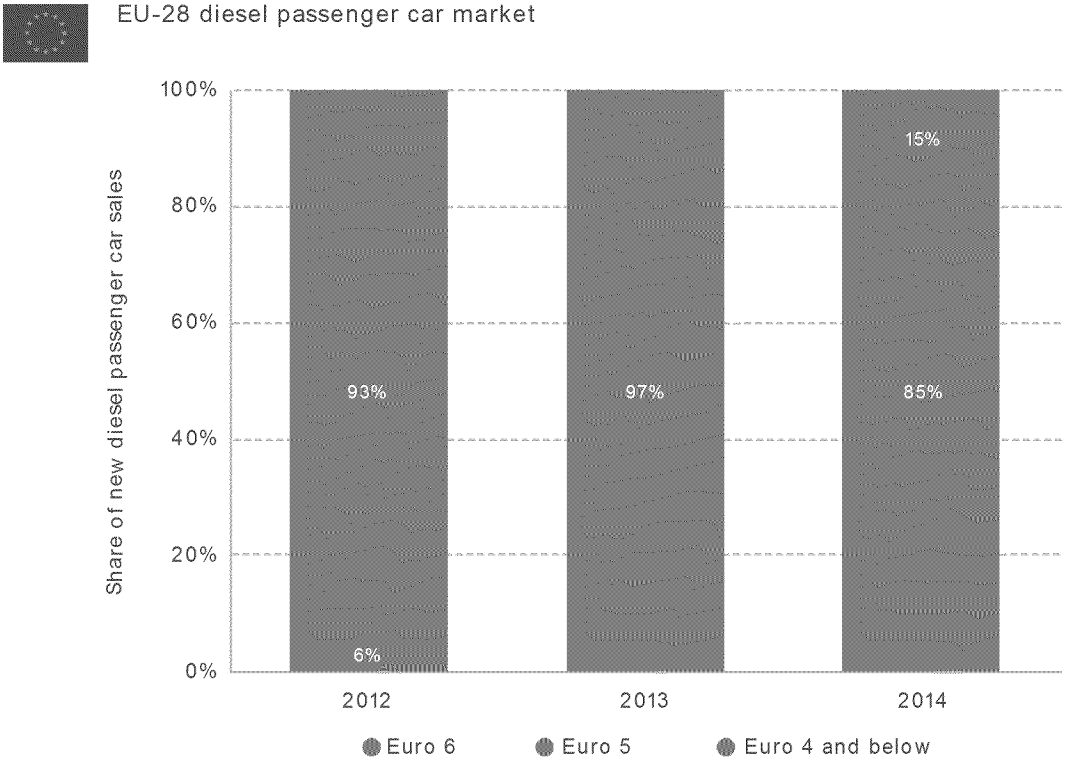

figure 2: Market shares of euro 6, euro 5, and euro 4 passenger cars, 2012–2014

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2.2.1. euro 6 diesel market shares by manufacturer

in 2014, **german automakers dominated the Euro 6 diesel passenger car market** in the eu. BMW was the manufacturer with the largest market share; about 220,000 euro 6 BMW diesel cars were sold, capturing 22% of the market. it was followed by Mercedes-Benz (21%), Audi (15%), and Volkswagen (13%). the first non-German manufacturer in terms of market share was Japanese manufacturer Mazda, which captured 7% of the market (Figure 3, outer ring).

German manufacturers also dominated the us diesel market, where all diesel passenger vehicles sold in 2014 were certified to the tier 2 emission standard (which can be considered more stringent than euro 6). Volkswagen sold 56% of the new diesel passenger vehicles (mostly its Jetta and Passat models), followed by BMW (15%), Audi (11%), and Mercedes-Benz (10%; see Figure 3, inner ring).

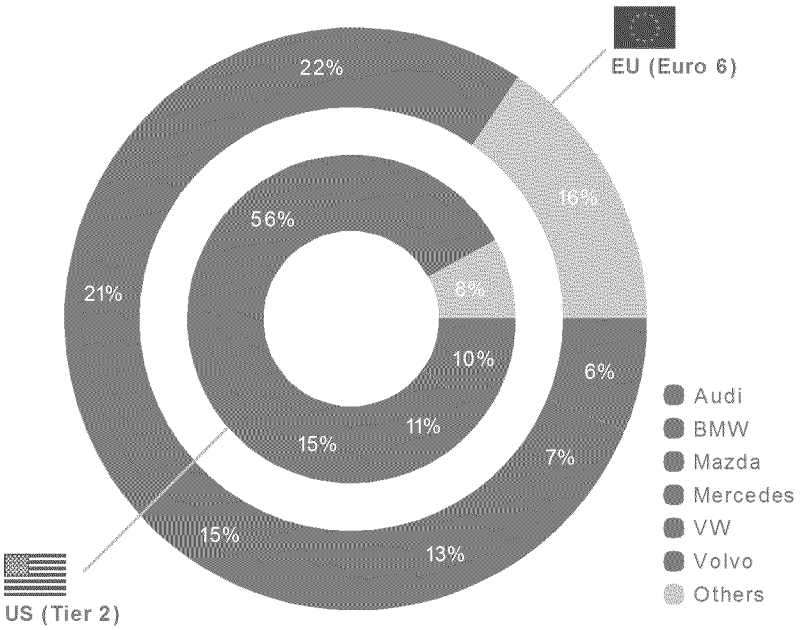

figure 3: 2014 market shares for euro 6 diesel passenger cars in the eu and tier 2 diesel passenger vehicles in the us, by manufacturer (us sales include light trucks)

if we look at the distribution of eu diesel passenger car sales of individual manufacturers by emission standard (Figure 4), **Mazda has the highest percentage of Euro 6 vehicles of its total diesel sales**: 94% of its diesel passenger cars sold in 2014 were certified to the euro 6 standard. other manufacturers with a high penetration of euro 6 diesel sales were Mercedes-Benz (47%), BMW (43%), and Audi (31%). several manufacturers saw significant relative increases in their shares of euro 6 vehicle sales for 2014. notable exceptions were Fiat, renault, and toyota, which have apparently chosen to delay the market introduction of their diesel euro 6 offerings (Figure 4).

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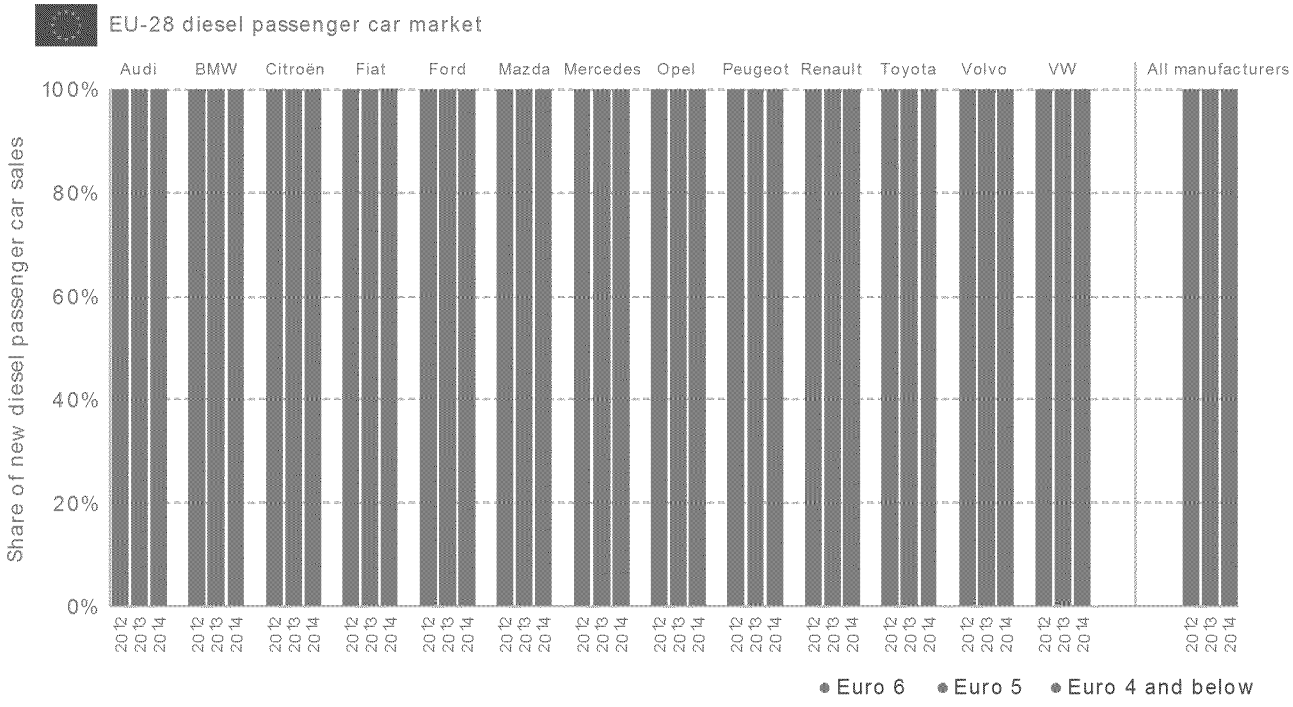

figure 4: relative market shares of euro standards for diesel passenger car sales, 2012–2014 eu (selected manufacturers)

2.2.2. euro 6 diesel NO_x control technology mix, by manufacturer

the market shares of the NO_x control technologies deployed in euro 6 diesel passenger passenger cars sold in the eu and in 2 passenger vehicles are quite different. especially noteworthy is the fact that whereas **the market share of LNT technology in the Euro 6 diesel market increased significantly over the past three years**—from 5% in 2012 to 55% in 2014—it dropped from 50% to 33% for 2 diesel passenger vehicles in the us. another interesting observation is that in 2013, BMW began us sales of cars with after treatment systems combining sCr and Lnt technology. this type of solution accounted for 100% of BMW's us diesel sales (15% of the total us diesel passenger vehicle market) in 2014. in the eu, however, the sources available for our assessment indicate that combined sCr+Lnt systems have not yet been put on the market as of 2014.

in Figure 5 we show the evolution of the shares of NO_x control technologies of euro 6 diesel passenger cars for the eu and 2 diesel passenger vehicles for the us for selected manufacturers for 2012–2014. From this chart, it can be observed that the manufacturers with a presence in both markets (namely Audi, BMW, Mercedes-Benz, and Volkswagen) feature two distinct NO_x control technology mixes. For example, in 2012, BMW focused on Lnt technology for the eu market and on sCr for its us-market offerings. in 2014, all the new BMW diesel passenger cars sold in the us employed a combination of sCr and Lnt technology, while in the eu the sales mix was 29% for sCr and 71% for Lnt. Mercedes, sCr featured in 100% of their diesel sales in the us market the past three years, while in the eu their Lnt share increased from below 1% in 2012 to 32% in 2014. A similar shift can be noted for Audi, whose Lnt share increased from 0% to 49% in the eu as it decreased from

4 During the preparation of this white paper, we reached out to several manufacturers to verify their no after treatment technology mixes. When asked about the differences in emissions control hardware between the vehicles sold in the eu and us, BMW representatives attributed the differences to different market compositions, with us vehicles being generally higher powered and better equipped.

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54% to 4% in the us. Volkswagen has a balanced Lnt and sCr mix in the us, but in the eu it has rapidly come to rely on Lnt. this technology experienced a remarkable increase in market share from 0% in 2012 to 96% in 2014 for this particular manufacturer.

some manufacturers have decided to focus on a single diesel NO_x control technology. For instance, Citroën, Peugeot, and Porsche employed 100% sCr, while Mini and Volvo chose Lnt for all of their euro 6 diesel passenger cars. **Mazda is the only manufacturer that has extensively deployed inner-engine optimizations coupled to EgR to meet the Euro 6 standard**. All of its euro 6 diesel passenger cars sold in the eu in the past three years rely on this technology for control of NO_x emissions.

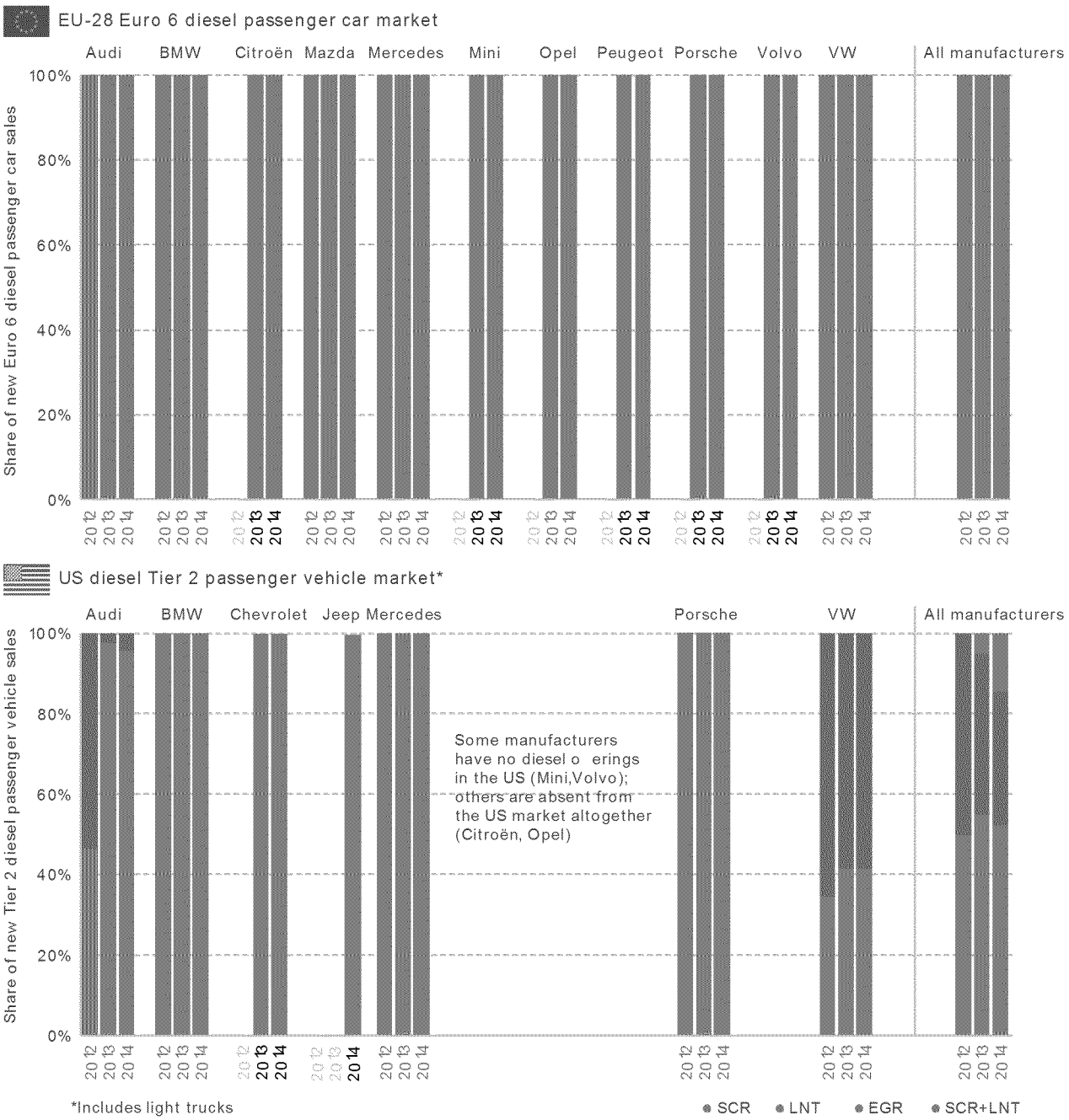

figure 5: Market shares of euro 6/2 NO_x control technologies in the eu and us, 2012–2014, by manufacturer

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3. experimentAl Assessment of emissions control performAnce

in this section, we analyze a large dataset of measured emissions to assess the emissions performance of euro 6 diesel passenger cars, and to investigate differences in performance across the different technologies and vehicle manufacturers.

3.1. DaTa SOURCE aND DRiViNg CyCLES

the data presented in this section were kindly provided by ADAC, which as mentioned earlier is the largest car club in europe. ADAC frequently tests the emissions of passenger cars as part of its test program, which is intended as an independent evaluation of the real-world fuel consumption and emissions performance of cars sold in the european market (ADAC, 2015b). the measurements reported in this paper cover 32 euro 6 diesel passenger cars from 10 manufacturers that were tested between August 2012 and June 2014. these vehicles provide a good coverage of the three main NO_x control technologies discussed in section 1, as well as vehicle segments ranging from small cars (european B and C segments) to large luxury sedans (F segment), although German car manufacturers (in particular BMW) are over-represented in the vehicle sample. Further details on the test vehicles are given in table 2.

Table 2: overview of vehicles included in the experimental assessment (all vehicles diesel euro 6, tested by ADAC)

iD	Vehicle segment	Manufacturer (short iD)	NO_x control technology	year of test	Engine power [kW]	Displacement [cm^3]
1	small (B)	opel (oPL)	Lnt	2014	100	1598
2	Lower Medium (C)	BMW (BMW)	Lnt	2013	135	1995
3	Lower Medium (C)	BMW (BMW)	Lnt	2014	135	1995
4	Lower Medium (C)	Citroën (Cit)	sCr	2013	110	1997
5	Lower Medium (C)	Mazda (MZD)	eGr	2013	110	2191
6	Lower Medium (C)	renault (rL)	Lnt	2013	96	1598
7	Medium (D)	Audi (AuD)	sCr	2014	190	2967
8	Medium (D)	BMW (BMW)	Lnt	2012	120	1995
9	Medium (D)	BMW (BMW)	Lnt	2012	135	1995
10	Medium (D)	BMW (BMW)	Lnt	2013	120	1995
11	Medium (D)	BMW (BMW)	Lnt	2013	135	1995
12	Medium (D)	Mazda (MZD)	eGr	2014	110	2191
13	Medium (D)	Mazda (MZD)	eGr	2013	110	2191
14	Medium (D)	Mazda (MZD)	eGr	2013	110	2191
15	Medium (D)	Mazda (MZD)	eGr	2012	110	2191
16	Medium (D)	Mercedes-Benz (Mer)	sCr	2014	125	2143
17	Medium (D)	Mercedes-Benz (Mer)	sCr	2012	150	2143
18	Medium (D)	Volvo (Vlo)	Lnt	2014	133	1969
19	Medium (D)	Volkswagen (VW)	sCr	2013	103	1968
20	upper medium (e)	BMW (BMW)	Lnt	2013	135	1995
21	upper medium (e)	BMW (BMW)	Lnt	2012	135	1995
22	upper medium (e)	BMW (BMW)	Lnt	2012	280	2993

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Table 2: overview of vehicles included in the experimental assessment (all vehicles diesel euro 6, tested by ADAC)

iD	Vehicle segment	Manufacturer (short iD)	NO_x control technology	year of test	Engine power [kw]	Displacement [cm^3]
23	upper medium (e)	BMW (BMW)	sCr	2013	190	2993
24	upper medium (e)	hyundai (hYu)	Lnt	2013	110	1995
25	upper medium (e)	Mercedes-Benz (Mer)	sCr	2013	125	2143
26	Luxury (F)	Audi (AuD)	sCr	2013	190	2967
27	Luxury (F)	Audi (AuD)	sCr	2013	184	2967
28	Luxury (F)	BMW (BMW)	Lnt	2013	190	2993
29	Luxury (F)	BMW (BMW)	Lnt	2011	180	2993
30	Luxury (F)	BMW (BMW)	Lnt	2012	280	2993
31	Luxury (F)	Mercedes-Benz (Mer)	sCr	2013	190	2987
32	Luxury (F)	Mercedes-Benz (Mer)	sCr	2013	190	2987

the emission measurements were conducted in a chassis dynamometer laboratory using the type-approval road loads provided by manufacturers. ADAC tests all vehicles at their actual measured weight, using commercially available fuel, and at a room temperature of 22±2°C (ADAC, 2015c). Fuel consumption and emissions data were available for all cars for both the new european Drive Cycle (neDC) and the Worldwide harmonized Light Vehicles test Cycle (WLtC):

» neDC was introduced in europe in the 1990s, as a standard driving cycle to evaluate the emission levels of light-duty vehicles under laboratory conditions. it includes an urban phase comprising 4 repeated eCe-15 urban driving sub-cycles and an extra-urban phase consisting of a single euDC sub-cycle (see Figure 6, top). the neDC has often been criticized for being a **poor representation of real-world driving** conditions (Kågeson, 1998; Mellios, hausberger, Keller, samaras, & ntziachristos, 2011).

» WLtC was developed at the united nations level and it has been recently adopted into a uneCe regulation (Marotta, Pavlovic, Ciuffo, serra, & Fontaras, 2015). WLtC includes four sub-cycles: low-speed, middle-speed, high-speed, and extra-high-speed (see Figure 6, bottom). With more dynamic driving conditions, such as a higher maximum velocity and a smaller share of idling time (see Figure 3), the WLTC **can be considered as a more realistic driving cycle that can better represent actual on-road vehicle emissions**, even though it is still a laboratory cycle with predefined ambient conditions and no road gradient. the european Commission is now preparing to add the WLtC for type-approval testing for new vehicles from 2017 (Mock et al., 2014). For their most recent series of measurements (such as those reported in this paper), ADAC employs Version 2.0 of the WLtC, which is somewhat different from the latest version of the WLtC (Version 5.3)[5]. even though WLtC is devised as a cold-start cycle, ADAC runs a hot-start version of it, with a starting engine temperature of about 90°C. During the hot WLtC test, the air conditioning system of the vehicles is switched on, with the temperature selector set to 20°C (ADAC, 2015c).

5 Version 5.3 of WLtC is plotted along with version 2.0 at the bottom of Figure 6. Besides the differences in the velocity profile (e.g., WLtC 5.3 reaches a higher maximum velocity), there are minor differences in the gear shift model and in the road load settings for either model. According to ADAC, WLtC 5.3 would lead to higher NO_x emissions than WLtC 2.0.

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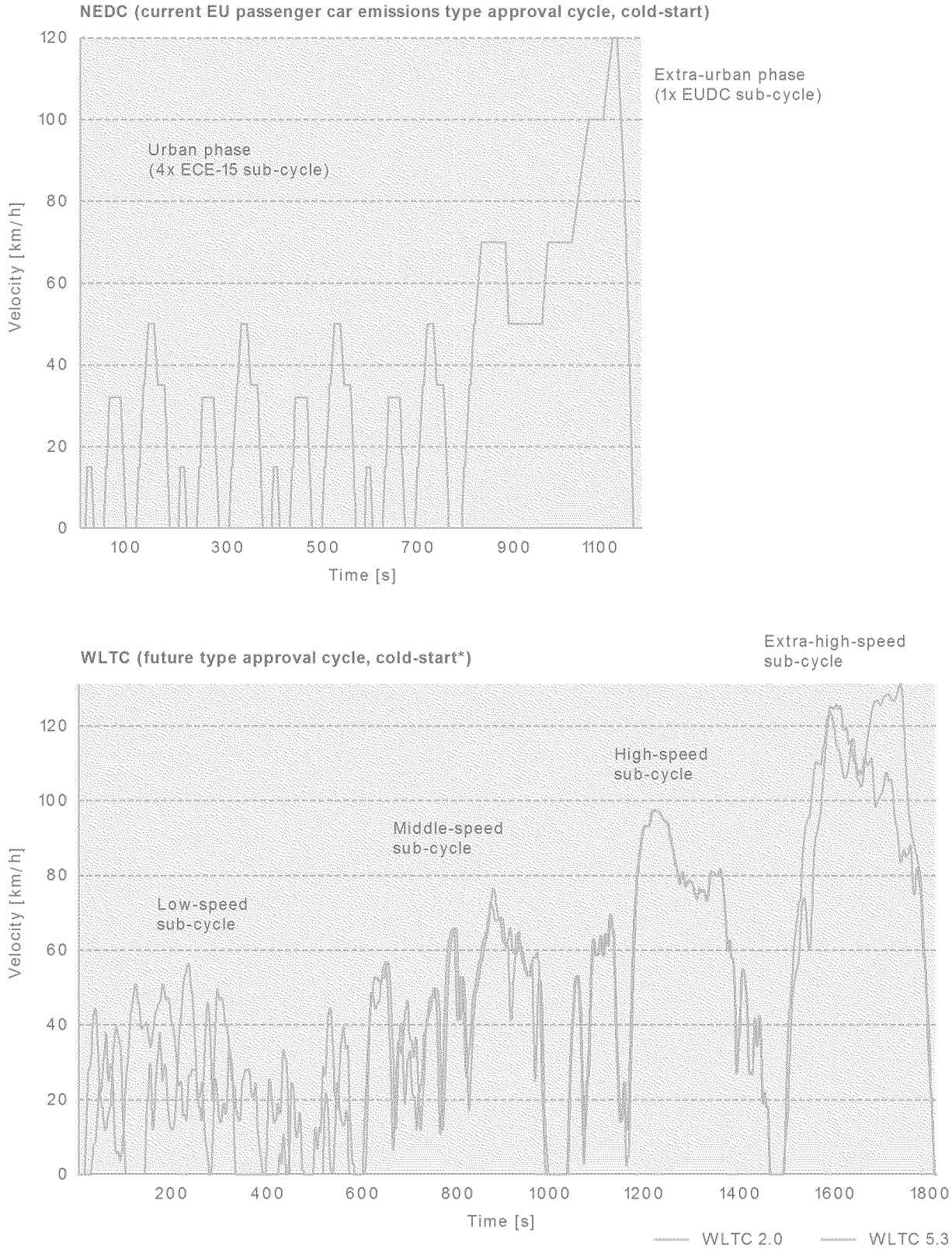

*WLTC is meant as a cold-start cycle, but the hot-start version of WLTC 2.0 was run for the ADAC tests

figure 6: time-velocity profiles of the neDC and WLTC driving cycles

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Table 3: Descriptive parameters of the neDC and WLTC 2.0 driving cycles

	NEDC	WLTC 2.0
Cycle type	Cold-start	Cold-start*
Cycle time [s]	1180	1800
Distance [km]	11.03	23.27
Mean velocity [km/h]	Whole cycle: 33.6 urban phase: 18.7 extra-urban phase: 62.6	Whole cycle: 46.5 Low-speed sub-cycle: 18.2 Middle-speed sub-cycle: 41.6 high-speed sub-cycle: 55.5 extra-high-speed sub-cycle: 89.8
Maximum velocity [km/h]	120.0	125.5
Stop share [% of time]	23.7	13.0

*hot-start version of WLTC used for ADAC eco test

3.2. OVERVIEw Of EXPERiMENTaL RESULTS

in this section we analyze the results of the laboratory measurements performed by ADAC as part of their eco-test program. in order to provide a simple way to assess the emissions performance of different vehicles, **we will use the concept of conformity factor (Cf) instead of the absolute emission values in g/km.** the CF is calculated as the ratio of the measured emissions to a regulated emission limit. A conformity factor of 1 or below means that the car in question met the regulated limit, whereas **a high Cf is indicative of poor emissions performance**. in this case, the reference emission limit for NO_x is the euro 6 type-approval test limit of 80 mg/km. similarly, we calculated a "CO_2 ratio" as the ratio of measured CO_2 emissions over the official type-approval value (which varies with each vehicle model).

in Figure 7 we plot the average CFs for NO_x and CO (carbon monoxide), as well as the CO_2 ratios, for all 32 vehicles tested and for the three vehicle subsets defined by the NO_x control technology.

the CFs for NO_x are markedly different between the neDC and WLTC. While NO_x emissions stayed below the regulated limit in the neDC, but the CFs were significantly higher than 1 in the WLTC. this was observed for the sCr„ lean and eGr vehicle subsets. this is especially striking because the neDC tests included cold-start emissions, while the WLtC tests did not. the CF for the WLTC tests would have been even higher if cold-start tests had been performed. Given the special relevance of real-world NO_x emissions from euro 6 diesel cars, **these results are discussed in more detail in Section 3.3**.

the CFs for CO are also very different for the two cycles, but in the case of this pollutant, the neDC values are higher than those of the WLTC. this is likely the result of cold-start operation, which is not covered by the WLTC tests. **All vehicles managed to stay safely below the regulated limit of 500 mg of CO per km** (CF=1; marked with a red line in Figure 7) over both cycles.

the CO_2 ratios were consistently around 1.25. i.e., CO_2 emissions were, on average, 25% higher than the corresponding type-approval values. sCr-equipped vehicles seem to pay a small penalty (an average CO_2 ratio of 1.32) during the neDC tests that is not apparent from WLTC measurements, and which may be related to the neDC cold start.

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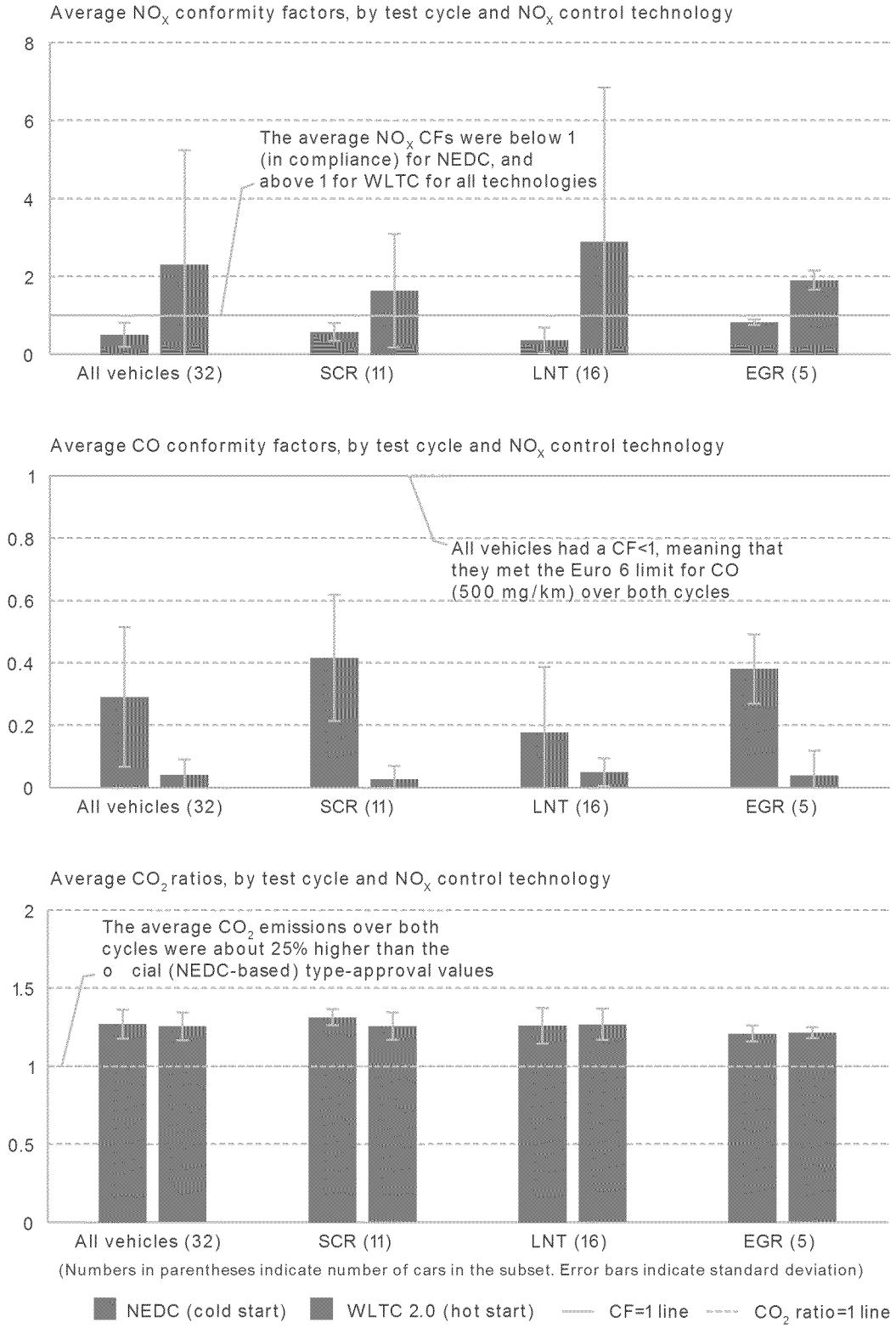

figure 7: Average experimental conformity factors for NO_x and CO, and CO_2 ratios, by test cycle and NO_x control technology

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3.3. aSSESSMENT Of NO_x EMiSSiON RESULTS

in this section, we will analyze the NO_x emission profile of the vehicles tested by ADAC. in Figure 8, we plot the NO_x CFs for all the vehicles listed in Table 2. From this chart, it is apparent that all vehicles except one (Vehicle 6, which exceeded the euro 6 limit by just 1 mg of NO_x per km) had a conformity factor below 1 for neDC (i.e., they met the regulated limit under the type-approval test). on the other hand, this same NO_x emissions performance over the WLtC cycle was noticeably worse—even though **cold-start emissions were avoided by running the hot-start version of the cycle**—and some of these outlier vehicles could be considered high emitters.

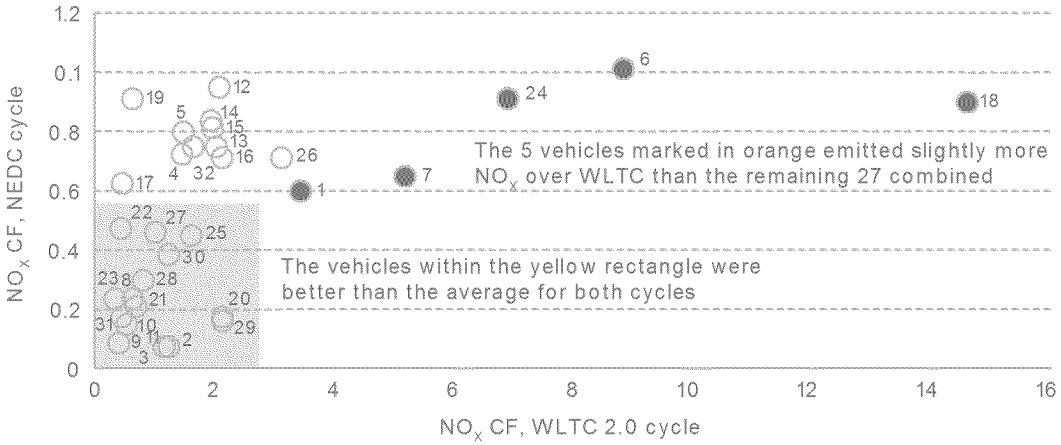

figure 8: scatterplot of NO_x conformity factors for 32 vehicles (iD codes as listed in Table 2)

in Figure 9, the NO_x CF of each vehicle over the neDC is plotted against the corresponding NO_x CF over WLtC. the results are disaggregated by emission control technology, vehicle size segment, and manufacturer (respectively, from top to bottom of the figure):

- the *results by NO_x control technology* indicate that most sCr- and eGr-equipped vehicles performed relatively well over the WLtC, but their average CF (1.6 for sCr and 1.9 for eGr) is still higher than the average CF over the neDC (0.6 for sCr and 0.8 for eGr). Lnt-equipped vehicles have the best performance over the neDC (0.4) but the worst over the WLtC (2.9). Also, **three vehicles equipped with LNTs (Vehicles 18, 6, and 24) had extreme NO_x emission levels** (1167 mg/km, 708 mg/km and 553 mg/km of NO_x, respectively). this is a clear indication that, *in some cases*, Lnt technology is tuned to deliver good performance on the certification test, but not necessarily under the more transient, real-world conditions represented by the WLtC.
- By looking at the average NO_x CFs of *different vehicle segments* in Figure 9 (middle), we can observe that vehicles of larger size tend to perform better over both the neDC and WLtC. this is likely due to the fact that **larger vehicles tend to employ SCR for NO_x emissions control**, and sCr has a relatively good performance over both the neDC and WLtC.
- Figure 9 (bottom) shows the *results by vehicle manufacturer*. The **13 vehicles from BMw performed especially well over the NEDC** (NO_x CF of 0.2) and, despite a fivefold increase in emissions, were still somewhat better than average over the WLtC. the single Volkswagen vehicle that was tested by ADAC also had a low CF over both the neDC and WLtC. Mercedes-Benz vehicles also had a relatively good average performance, the single vehicles from Volvo, renault, and hyundai had

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very high NO_x emissions over the WLTC (CFs of 14.6, 8.8, and 6.9, respectively). interestingly, these vehicles were just on the edge of compliance under neDC testing (CFs of 0.9, 1.0, and 0.9). **These vehicles would very likely be unfit to pass the RDE test**, and would thus be left out of the eu market (unless they had their NO_x control systems recalibrated) if rDe type-approval criteria applied today.

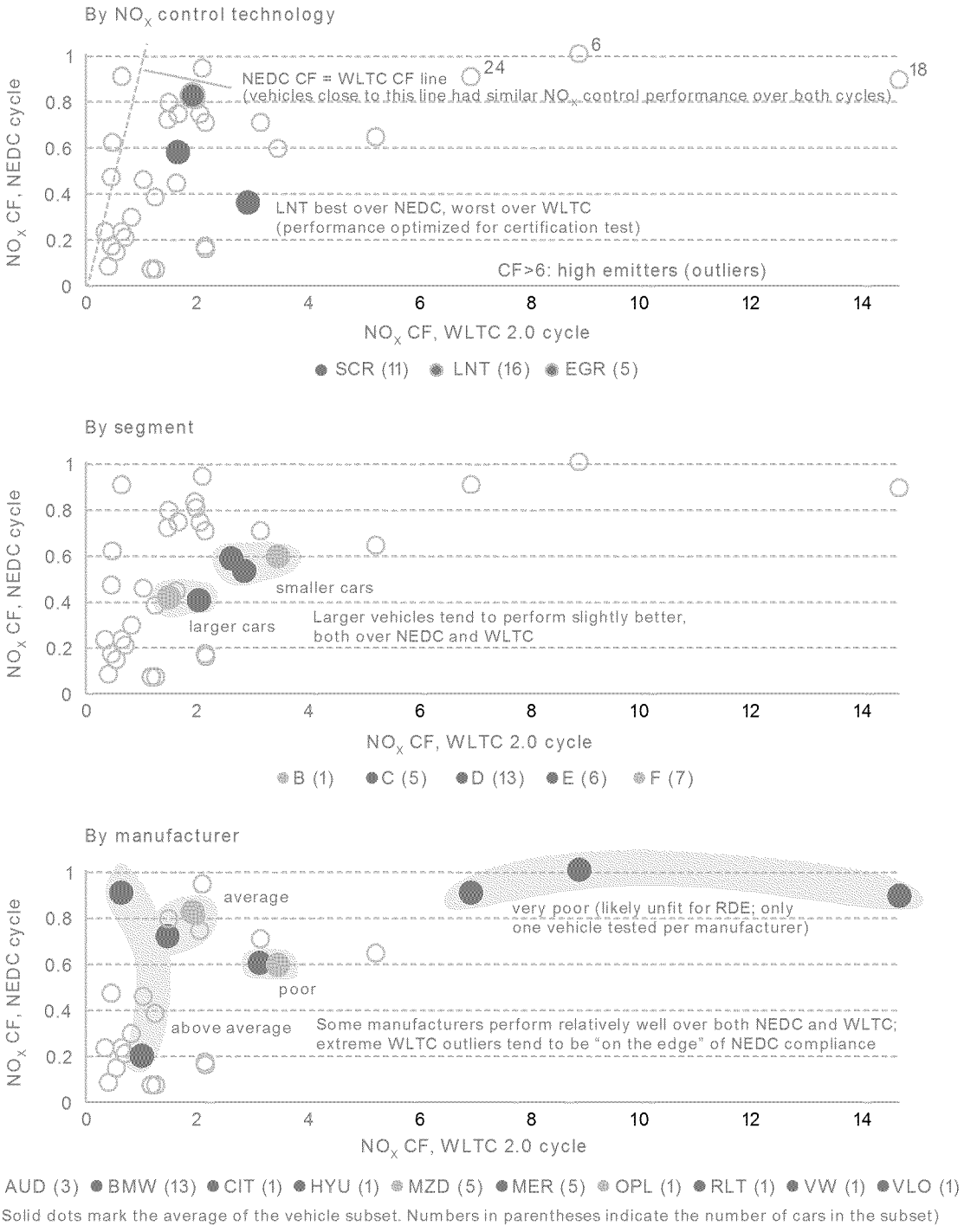

figure 9: experimental NO_x emission performance over the neDC and WLTC for all 32 vehicles, by NO_x control technology, vehicle segment, and manufacturer

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the results of Figure 9 point to a **serious compliance problem for NO_x emissions from current Euro 6 diesel passenger cars**. it should be noted that NO_x emissions from diesel cars are a unique case in this sense, and that no other pollutant from either gasoline or diesel passenger cars (with the possible exception of particle number emissions from GDi vehicles) presents a comparable challenge regarding its control.

in Figure 10 we show the average NO_x CFs by cycle phase or sub-cycle, for both the neDC and the WLTC. this figure reveals the differences in NO_x control performance for the driving situations represented by the cycle phases of sub-cycles. The average conformity factor for all sub-cycles of WLTC was above 1, regardless of the NO_x control technology. Conversely, the average CF for both phases of neDC stayed below 1, except for sCr vehicles during the urban phase (mean CF of 1.04). As the cold start occurs before the first urban phase, higher emissions during the urban phase are to be expected. in general, the highest CFs were recorded for the low-speed and extra-high-speed sub-cycles of WLTC (representing urban and highway driving, respectively). **SCR vehicles were notably better than the rest during the (high-load) extra-high-speed sub-cycle of WLTC**. interestingly, Lnt was the technology with the best average CFs for neDC and the worst average CFs for WLTC. While standard deviation (scatter) of CFs for Lnt CFs was also the largest, **due to the presence of a few high NO_x emitters** in this vehicle subset. on the other hand, eGr vehicles appear to have a rather stable NO_x emission behavior that is less affected by the driving profile. The scatter in these measurements is also the lowest, which is not surprising considering that all the vehicles in this subset are from the same manufacturer (Mazda) and share the same engine.

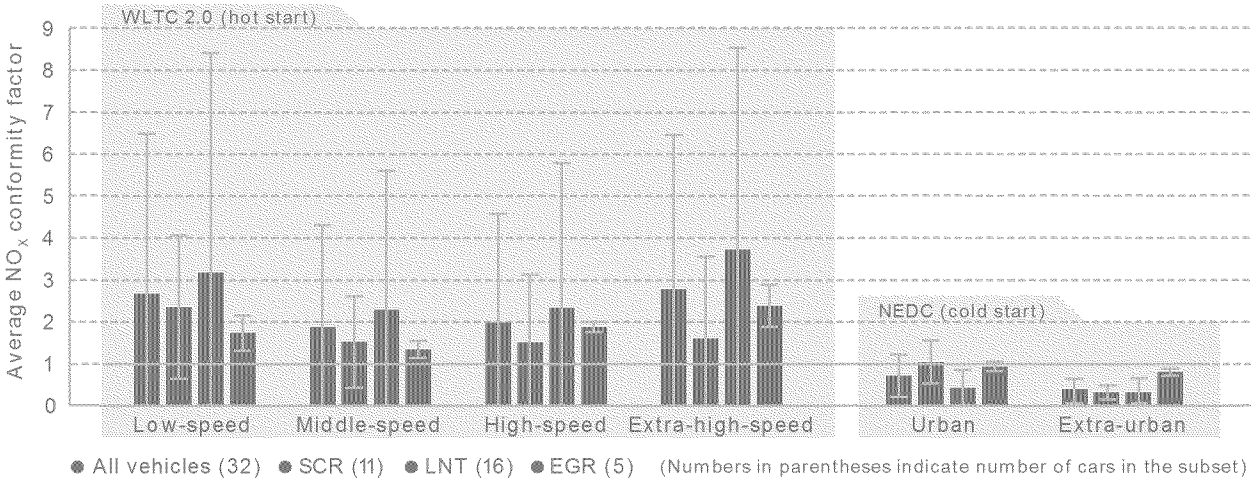

figure 10: Average NO_x CFs by cycle phase / sub-cycle and NO_x control technology (error bars indicate standard deviation)

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Finally, in Figure 11 we plot the NO_x CFs and CO_2 ratios of each the different phases of neDC and sub-cycles of WLTC. this figure gives additional information on the type of driving situations that are leading to high NO_x emissions. the vehicle technologies of the corresponding vehicles are indicated in some of the data markers for reference. Just like in Figure 9, we can observe how the NO_x CFs over neDC and WLTC are significantly different:

- the results for neDC (top of Figure 11) show that just a couple of vehicles had no NO_x CFs above 1.5 for any phase (the mean NO_x CF for all neDC phases was 0.5), and this happened for the urban phase only. of the nine urban phases with the highest NO_x emissions over neDC, six of them are from vehicles equipped with sCr. A likely cause for this is that the neDC is a rather low-load driving cycle, and so the temperature of exhaust usually stays below 200°C. As a result, the sCr catalyst does not warm up sufficiently during the urban phase of neDC and therefore operates less efficiently.
- the results for the WLTC sub-cycles (bottom of Figure 11) show that very high NO_x emissions occur mostly during the low-speed and extra-high-speed WLTC cycles. three Ln-equipped vehicles had very poor performance, with NO_x CFs rising above 10 for eight sub-cycles. to the extent that WLTC can be considered a realistic driving cycle, the results indicate that the current neDC testing framework allows a large discrepancy between the actual, on-road NO_x emissions and the emission certification tests, and **it is therefore insufficient to address air quality problems related to NO_x.**

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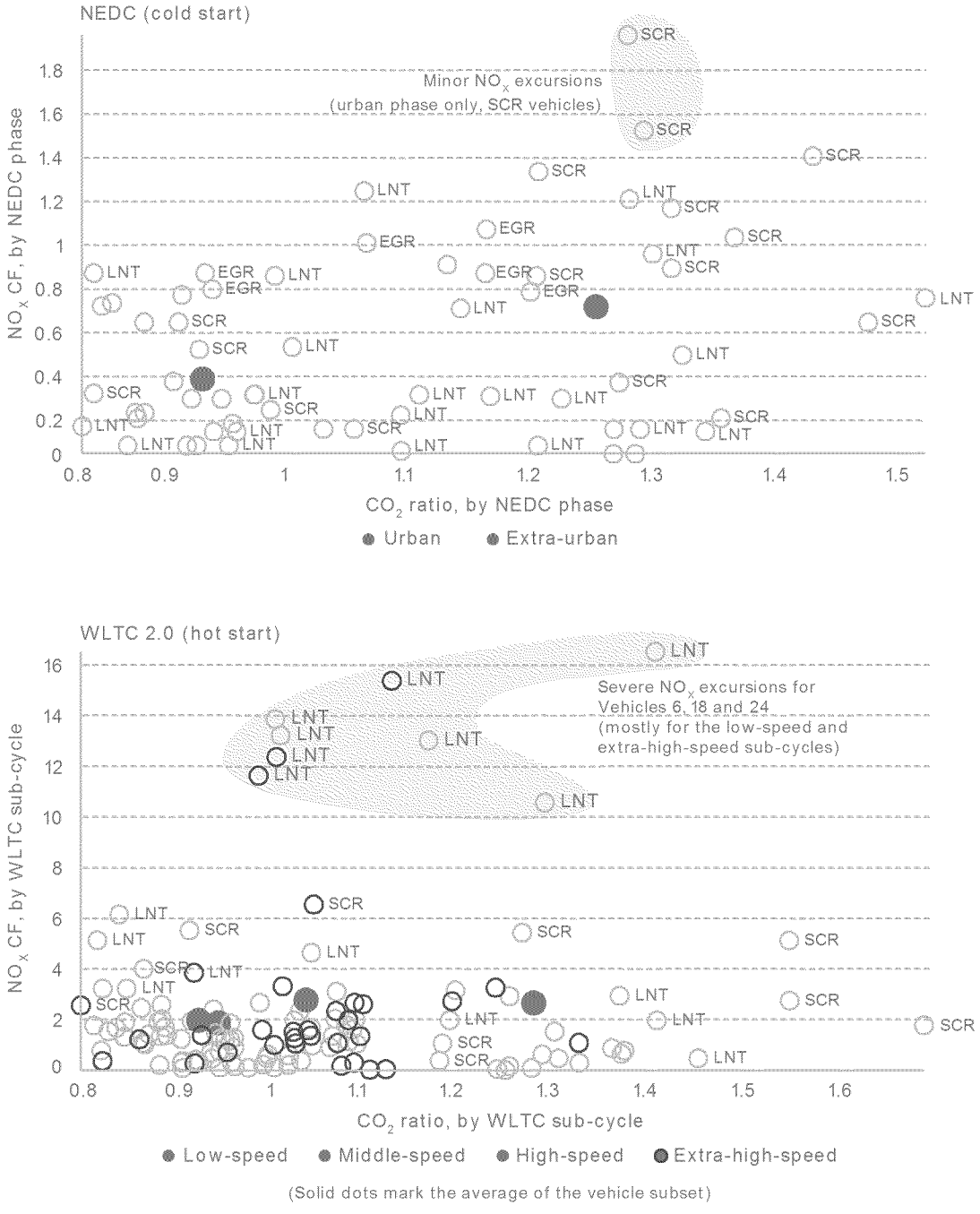

figure 11: experimental NO_x emission performance over the NEDC and WLTC cycles for all 32 vehicles, by NEDC phase/WLTC sub-cycle (see Figure 6).

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4. conclusions And policy recommendAtions

the new euro 6 diesel passenger cars must meet an emission limit of 80 mg of NO_x per kilometer, down from 180 mg/km for euro 5 diesel vehicles. But this emission limit is not as stringent as it appears on paper, because it applies to an outdated emissions certification driving cycle (neDC) that should soon be replaced by a somewhat more realistic one (WLTC). however, in all likelihood, **the biggest challenge for diesel passenger car manufacturers will not arise from the laboratory test under the certification cycle (be it the NEDC or the wLTC), but from the impending real-driving emissions (RDE) test**, which is scheduled to become a mandatory step for the type approval of passenger cars in the eu in 2016 (with an initial 20-month monitoring phase during which no on-road emission limits will be enforced). under this new testing framework, diesel passenger cars will have to prove that they can keep NO_x emissions at reasonably low levels using an on-road test that more closely represents real-world driving situations.

the phase-in of the euro 6 standard in the eu was accompanied by the widespread introduction of several technologies to control NO_x emissions from diesel passenger cars. in the first part of this paper, we introduced these technologies, and we showed the different strategies that vehicle manufacturers have adopted for their deployment in the eu and us markets. some key differences between eu and us NO_x technology control choices (e.g., the prevalence of Lnt in europe, and the emergence of combined sCr+Lnt solutions in the us, likely because this type of solution is ultimately required for compliance with the low-emission bin 20 regulations) seem to indicate that the different regulatory frameworks (the us has lower nominal emission limits, more demanding test cycles, and a robust enforcement and compliance program that the eu lacks) have a direct influence upon the technological choices made by diesel passenger car manufacturers.

in this paper, we focused mostly on NO_x because the emissions of this pollutant do not seem to be properly controlled outside of the artificial conditions of neDC testing. the experimental results analyzed in this paper add to the overwhelming amount of empirical evidence that **NO_x emissions from diesel passenger cars are not properly controlled under the current, NEDC-based testing framework**. the experimental NO_x conformity factors over the WLTC and neDC helped us explore the differences among the real-world performance of different technologies, as well as the differences in the robustness of the implementations of these technologies made by individual manufacturers. the fact that the three worst-performing vehicles were all equipped with lean NO_x traps does not mean that all equipped vehicles would be unfit to pass the rDe on-road test. in fact, a few of the best-performing vehicles over both the neDC and the WLTC were equipped with this technology. What those results do indicate is that the current neDC testing framework is insufficient to ensure that euro 6 vehicles have acceptable NO_x emissions under real conditions of use, and that the new rDe regulations are fully justified and much needed. since rDe cannot apply retroactively to existing euro 6 type-approval certificates, it is essential to act fast and **ensure that additional high emitters of NO_x are prevented from entering the market**. urgent remedial (technological) action on the part of vehicle manufacturers is also required to **avoid the stigmatization of diesel cars**.

6 As demonstrated in a recent iCCt publication (Franco et al., 2014), this is frequently not the case for the current generation of euro 6 diesel passenger cars.

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An effective implementation of rDe would be a major step in the right direction that should help address europe's urban air quality problems in the long run. in the coming months, the european Commission will continue to work with stakeholders to determine the conformity factors that will apply to on-road rDe tests. the European Commission will phase in rDe testing in two subsequent steps with increasing levels of stringency. it is widely expected that **the initial step of conformity factors (applicable from September 2017 onward) will lie around a value of 2 for NO_x emissions from diesel passenger cars**—i.e., these vehicles will still be allowed to emit about twice the regulated euro 6 emission limit of 80 mg/km during the on-road test, effectively making this **the first time that the Euro standards will be changed to raise an emission limit instead of lowering it**. Moreover, since rDe does not include cold-start emissions, the allowed increase will be substantially higher than is indicated by the conformity factor. t second step of rDe, likely to apply from 2019 onward, should bring conformity factors close to 1 and make euro 6 diesel cars come closer to delivering on their promise (albeit seven years after their initial market introduction). this promise should address the urgent problem of keeping euro 6 diesel passenger cars with weak on-road NO_x control from being awarded emissions type-approval certificates in the first place. it will also give manufacturers sufficient lead time to make the necessary calibrations to their software and emissions aftertreatment hardware adjustments to their vehicles to improve their real-world NO_x emissions performance, which we will continue to watch closely.

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VW FOIA, EPA 06/20/2017 2017-FFP_023574

To: McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
From: Grundler, Christopher
Sent: Wed 9/16/2015 12:59:33 PM
Subject: Re: VW Briefing Materials for 9:15 Wednesday

No reason we cannot do the announcement earlier on Friday

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 16, 2015, at 8:27 AM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:
>
> I agree it would be much better to have you hear for d-day
>
> -----Original Message-----
> From: Giles-AA, Cynthia
> Sent: Wednesday, September 16, 2015 7:55 AM
> To: McCabe, Janet
> Cc: Grundler, Christopher; Garbow, Avi
> Subject: RE: VW Briefing Materials for 9:15 Wednesday
>

Non-Responsive

> Larry will be standing in while I am away. For this announcement, would I think be good if I could do it if that's possible.
>
> -----Original Message-----
> From: McCabe, Janet
> Sent: Wednesday, September 16, 2015 7:52 AM
> To: Giles-AA, Cynthia
> Cc: Grundler, Christopher; Garbow, Avi
> Subject: Re: VW Briefing Materials for 9:15 Wednesday
>
> **Non-Responsive** but could join announcement calls via phone (and connect by video to HQ).
>
> Is Friday morning out for you? Would/will Larry stand in for you while you're away?
>
> Sent from my iPhone
>
>> On Sep 16, 2015, at 7:49 AM, Giles-AA, Cynthia <Giles-AA.Cynthia@epa.gov> wrote:
>>

Non-Responsive

>>

To: Huffman, Linda[Huffman.Linda@epa.gov]
From: Brooks, Phillip
Sent: Wed 9/16/2015 1:17:31 PM
Subject: Fwd: VW Briefing Materials for 9:15 Wednesday
ATT00001.htm

Sent from my iPhone

Begin forwarded message:

From: "Grundler, Christopher" <grundler.christopher@epa.gov>
Date: September 15, 2015 at 10:09:34 PM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>, "Garbow, Avi" <Garbow.Avi@epa.gov>, "Giles-AA, Cynthia" <Giles-AA.Cynthia@epa.gov>
Cc: "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Bunker, Byron" <bunker.byron@epa.gov>, "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Cook, Leila" <cook.leila@epa.gov>, "Schmidt, Lorie" <Schmidt.Lorie@epa.gov>, "Orlin, David" <Orlin.David@epa.gov>
Subject: VW Briefing Materials for 9:15 Wednesday

Good Evening:

Attached is a briefing document we will use for our 9:15am discussion tomorrow

Chris

To: Senn, John[Senn.John@epa.gov]
From: Belser, Evan
Sent: Wed 9/16/2015 1:34:36 PM
Subject: Fwd: VW Q+As.docx
VW Q+As.docx
ATT00001.htm

I'm going to forward a couple emails which are scattered but give you a sense of the materials under development.

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

Begin forwarded message:

From: "Alexander, David" <Alexander.David@epa.gov>
Date: September 15, 2015 at 6:06:05 PM EDT
To: "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>, "Belser, Evan" <Belser.Evan@epa.gov>
Cc: "Orehowsky, Gregory" <Orehowsky.Gregory@epa.gov>
Subject: VW Q+As.docx

Attached please find a pretty good, but quick, fill-in of "As" to the provided "Qs" on VW (except a few which must be answered by others, mostly OTAQ.) Please let me know how else I can help.

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

From: Ex. 7
Location: Conf Call
Importance: Normal
Subject: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

Good Morning,

Please see below for dial-in information. Conf ID is at the bottom.

Thanks

Ex. 7

EPA:

Byron Bunker

Linc Wehrly

Jim Snyder

CARB:

Ex. 7

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app

formerly known as Lync.

Join by phone

Ex. 7

(Auburn Hills) English (United States)
(Auburn Hills) English (United States)
(Auburn Hills) English (United States)
(Auburn Hills) English (United States)

Find a local number

Conference ID: Non-Responsive

Forgot your dial-in PIN? | Help

From: Ex. 7
Location: Conf Call
Importance: Normal
Subject: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

Good Morning,

Please see below for dial-in information. Conf ID is at the bottom.

Thanks

Ex. 7

EPA:

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Linc Wehrly

Jim Snyder

CARB:

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(Auburn Hills) English (United States)
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(Auburn Hills) English (United States)

Find a local number

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From: Ex. 7 (EEO)
Location: Conf Call
Importance: Normal
Subject: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

.....
,,,,,,

Good Morning,

Please see below for dial-in information. Conf ID is at the bottom.

Thanks

Ex. 7

EPA:

Byron Bunker

Linc Wehrly

Jim Snyder

CARB:

Ex. 7

.....

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+1 (248) 754-6400 (Auburn Hills) English (United States)
+1 (855) 858-8080 (Auburn Hills) English (United States)
+1 (248) 630-0170 (Auburn Hills) English (United States)
+1 (248) 754-5055 (Auburn Hills) English (United States)

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Conference ID: **Ex. 6**

Forgot your dial-in PIN? | Help

From: Ex. 7 (EEO)
Location: Conf Call
Importance: Normal
Subject: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

.....
,,,,,,

Good Morning,

Please see below for dial-in information. Conf ID is at the bottom.

Thanks

Ex. 7

EPA:

Byron Bunker

Linc Wehrly

Jim Snyder

CARB:

Ex. 7

.....

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formerly known as Lync.

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+1 (248) 754-6400 (Auburn Hills) English (United States)
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+1 (248) 630-0170 (Auburn Hills) English (United States)
+1 (248) 754-5055 (Auburn Hills) English (United States)

Find a local number

Conference ID: **Ex. 6**

Forgot your dial-in PIN? | Help

From: Snyder, Jim
Location: Conf Call
Importance: Normal
Subject: Accepted: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

To: Belser, Evan[Belser.Evan@epa.gov]
Cc: Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Brooks, Phillip
Sent: Wed 9/16/2015 1:51:06 PM
Subject: Re: VW -- Meeting with John Thursday

Ex. 5

Sent from my iPhone

On Sep 16, 2015, at 9:36 AM, Belser, Evan <Belser.Evan@epa.gov> wrote:

Am I correct that we should prepare a letter referral immediately?

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 15, 2015, at 11:13 AM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

From: Fisherow, Walter Benjamin (ENRD)
[mailto:Walter.Benjamin.Fisherow@usdoj.gov]
Sent: Tuesday, September 15, 2015 10:53 AM
To: Brooks, Phillip
Subject: RE: VW -- Meeting with John Thursday

Yep – for now. Maybe attach the draft NOV.

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Tuesday, September 15, 2015 10:51 AM
To: Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
Subject: Re: VW -- Meeting with John Thursday

Letter referral good enough?

Sent from my iPhone

On Sep 15, 2015, at 10:39 AM, Fisherow, Walter Benjamin (ENRD) <Walter.Benjamin.Fisherow@usdoj.gov> wrote:

> Sure. By the way, is a referral coming?
>
> **From:** Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
> **Sent:** Tuesday, September 15, 2015 9:30 AM
> **To:** Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
> **Subject:** VW -- Meeting with John Thursday
>
> For the sake of making sure we can answer questions and continuity, I would like to bring Evan Belser, and for the sake of continuity while I am out of the Country, I would like to bring Rosemarie Kelly. Is that ok?
>
> Joe Poux invited Doug Parker, CID.

To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Chapman, Apple[Chapman.Apple@epa.gov]; Fried, Gregory[Fried.Gregory@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Klepp, Robert[Klepp.Robert@epa.gov]; Kulschinsky, Edward[Kulschinsky.Edward@epa.gov]; Kodish, Jeff[Kodish.Jeff@epa.gov]
From: Werner, Jacqueline
Sent: Wed 9/16/2015 2:12:47 PM
Subject: Draft AED gen agenda for noon today

Below please find the draft Agenda for Susan/Rosemarie. Please let me know if you have any additional comments/changes ASAP.

Thanks,
jj

MSEB :

Ex. 7

VW status

Ex. 7

Sent from my iPhone

Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

To: Fisherow, Walter Benjamin (ENRD)[Walter.Benjamin.Fisherow@usdoj.gov]
From: Brooks, Phillip
Sent: Wed 9/16/2015 3:03:57 PM
Subject: Re: VW

Do you need a list of names?

Sent from my iPhone

> On Sep 16, 2015, at 10:51 AM, Fisherow, Walter Benjamin (ENRD) <Walter.Benjamin.Fisherow@usdoj.gov> wrote:
>
> The regular AG conference room Non-Responsive After talking to you yesterday, Bruce and I spent a half hour with John. He's going to be very interested tomorrow.
>
> -----Original Message-----
> From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
> Sent: Wednesday, September 16, 2015 10:50 AM
> To: Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
> Subject: Re: VW
>
> Where is this meeting?
>
> Sent from my iPhone
>
>> On Sep 16, 2015, at 10:43 AM, Fisherow, Walter Benjamin (ENRD) <Walter.Benjamin.Fisherow@usdoj.gov> wrote:
>>
>> Yep, fine.
>>
>> -----Original Message-----
>> From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
>> Sent: Wednesday, September 16, 2015 6:00 AM
>> To: Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
>> Subject: VW
>>
>> It titties list for the meeting with John seems to have grown considerably. I had originally thought it was intended to be a small gathering. Given the current size of the list, it will be difficult for me not to bring two more people who are on our team. I trust that is OK.
>>
>> Sent from my iPhone

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: eDiscovery, eDiscovery
Sent: Wed 9/16/2015 3:30:45 PM
Subject: Automatic reply: Volkswagen

Thank you for contacting the eDiscovery help desk. Your request will be processed and a technician will be getting back to you within one business day.

To: Engel, Bethany (ENRD)[Bethany.Engel@usdoj.gov]; Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]
From: Kaul, Meetu
Sent: Wed 9/16/2015 4:13:00 PM
Subject: VW - list of participants from EPA

Rosemarie Kelly, Associate Director, Office of Civil Enforcement

Phillip Brooks, Director, Air Enforcement Division

Jacqueline Werner, Associate Director, Air Enforcement Division

Evan Belser, Chief, Mobile Source Enforcement Branch

Greg Orehowsky, Environmental Engineer and technical lead VW, Mobile Source Enforcement Branch.

I will be participating by phone.

Thanks,

mk

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Gary W. Rogers[Gary.Rogers@roush.com]
Cc: Brandie Schandelmeier[Brandie.Schandelmeier@sae.org]; Charmley, William[charmley.william@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
From: Moran, Robin
Sent: Wed 9/16/2015 4:21:08 PM
Subject: Chris Grundler's Presentation for SAE NAIPC
Grundler SAE NAIPC 2015 Presentation_final.pptx

Gary and Brandie,

Attached is Chris Grundler's final presentation for tomorrow's panel.

Gary, you mentioned last week that you would be able to send us David Merrion's presentation on the NAS report, and those of other panelists. Could you please reply to all, so that Bill and Chris have them directly as well?

Thanks, and good luck tomorrow!

Robin

Robin Moran

Senior Policy Advisor

U.S. EPA, Office of Transportation and Air Quality

2000 Traverwood Dr.

Ann Arbor, MI 48105

(734) 214-4781 (phone)

(734) 214-4821 (fax)

From: Gary W. Rogers [mailto:Gary.Rogers@roush.com]
Sent: Tuesday, September 08, 2015 8:35 AM
To: Charmley, William
Cc: Brandie Schandelmeier; Moran, Robin
Subject: RE: NAIPC Conference Call

Bill, please call my office number (734) 779-7536. Do you want to set up a conference call with Robin?

Gary

From: Charmley, William [mailto:charmley.william@epa.gov]
Sent: Tuesday, September 08, 2015 8:32 AM
To: Gary W. Rogers <Gary.Rogers@roush.com>
Cc: Brandie Schandelmeier <Brandie.Schandelmeier@sae.org>; Moran, Robin <moran.robin@epa.gov>
Subject: RE: NAIPC Conference Call

Gary –

Let's do 1:30 today.

What number should I call you at?

Thanks

Bill

Bill Charmley

Director

Assessment and Standards Division

Office of Transportation and Air Quality

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, MI 48105

desk ph. 734-214-4466

cell ph. 734-545-0333

e-mail: charmley.william@epa.gov

From: Gary W. Rogers [mailto:Gary.Rogers@roush.com]
Sent: Tuesday, September 08, 2015 8:26 AM
To: Charmley, William; Grundler, Christopher
Cc: Brandie Schandelmeier; Moran, Robin
Subject: RE: NAIPC Conference Call

Bill, thanks for following up.

I could talk today at 1:30PM. I could also do Monday, Sep 14, noon to 1:00PM. However, today would be preferred, if we can make it happen.

Thanks again and I look forward to speaking with you.

Gary

Gary W. Rogers

Vice President

Advanced Engineering

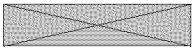
Roush Industries

(734) 779-7536 (O)

(248) 403-4000 (C)

Gary.Rogers@roush.com

-



www.ROUSH.com

From: Charmley, William [mailto:charmley.william@epa.gov]
Sent: Tuesday, September 08, 2015 8:14 AM
To: Gary W. Rogers <Gary.Rogers@roush.com>; Grundler, Christopher <grundler.christopher@epa.gov>
Cc: Brandie Schandelmeier <Brandie.Schandelmeier@sae.org>; Moran, Robin <moran.robin@epa.gov>
Subject: RE: NAIPC Conference Call

Gary –

I have not caught up with Chris today, so he may have a different response. Today is his first day in the office in 3 weeks (1 week of travel in mid august, then 2 weeks of vacation), so probably has some emails to catch up on! Also, Chris and I will be at off-site meetings Wednesday – Friday of this week.

I will be going with Chris to the conference next week, and Robin Moran on my staff has been taking the lead to get Chris prepared for the panel he will be on with Scott from FCA.

Given what I would guess will be limited time on Chris's calendar, how about if you and I (and Robin if she is available), find some time to talk? Here are some potential dates/times;

- Today (Tuesday) at 1:30
- Monday, September 14 at 9-10am or 12-1pm

Would any of these work for you?

Thanks

Bill

From: Gary W. Rogers [mailto:Gary.Rogers@roush.com]
Sent: Tuesday, September 08, 2015 7:40 AM
To: Grundler, Christopher
Cc: Brandie Schandelmeier; Charmley, William
Subject: RE: NAIPC Conference Call

Chris,

Would you have a few minutes later this week to discuss the Midterm Review Panel for NAIPC with me? I would just like to discuss format and logistics.

Thanks for agreeing to participate.

With kind regards,

Gary

Gary W. Rogers

Vice President

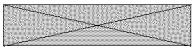
Advanced Engineering

Roush Industries

(734) 779-7536 (O)

(248) 403-4000 (C)

Gary.Rogers@roush.com



www.ROUSH.com

From: Brandie Schandelmeier [mailto:Brandie.Schandelmeier@sae.org]
Sent: Monday, August 31, 2015 12:48 PM
To: david@merrionexpertconsulting.com; grundler.christopher@epa.gov; Tom_Stricker@toyota.com; Nick.Tamborra@vw.com; linda.catenacci-jardine@fcagroup.com; Gary W. Rogers <Gary.Rogers@roush.com>; David Porreca <David.Porreca@sae.org>
Subject: NAIPC Conference Call - Please respond by Tuesday, September 1

The 2015 North American International Powertrain Conference is rapidly approaching! Gary Rogers would like to get the Moderator and Panelists of the panel titled "CAFE Midterm Review: Pass, Fail, or Incomplete?" together for a planning call. Please click the link below and select the time(s) that will work best for you so that we can get this scheduled. Thanks!

Please note, all times are EST.

http://doodle.com/pfi62zakgur7sn23

Ms. Brandie Schandelmeier

SAE INTERNATIONAL

400 Commonwealth Drive

Warrendale, PA 15096

o +1.724.772.7191

m +1.724.822.7274

e brandie@sae.org

www.sae.org

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LIGHT-DUTY VEHICLE GREENHOUSE GAS STANDARDS: 2025 AND BEYOND

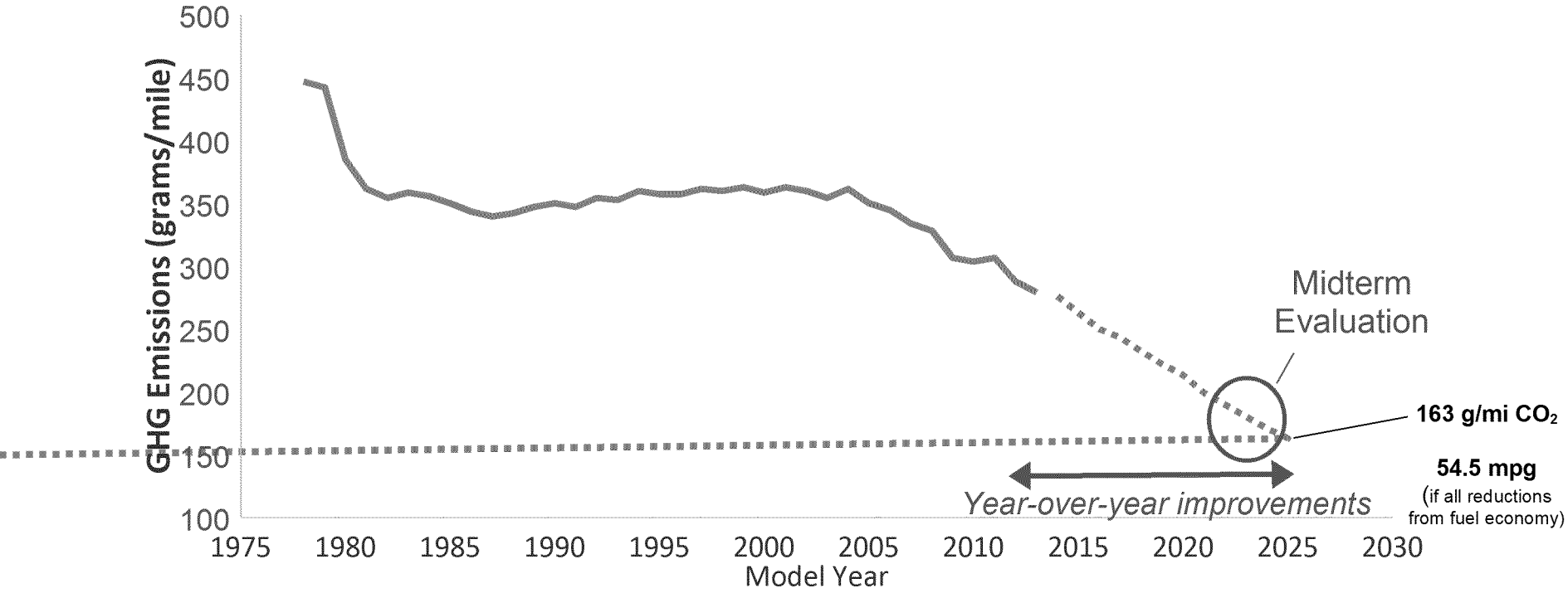
Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

September 17, 2015

SAE INTERNATIONAL

VW FOIA, EPA 06/20/2017 2017-FFP_023604

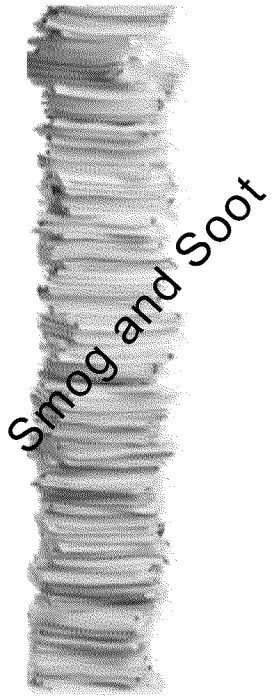
U.S. GHG/Fuel Economy standards provide significant benefits to climate, oil, consumers



VW FOIA, EPA 06/20/2017 2017-FFP_023605

We are just getting started in effort to avert the worst impacts of climate change

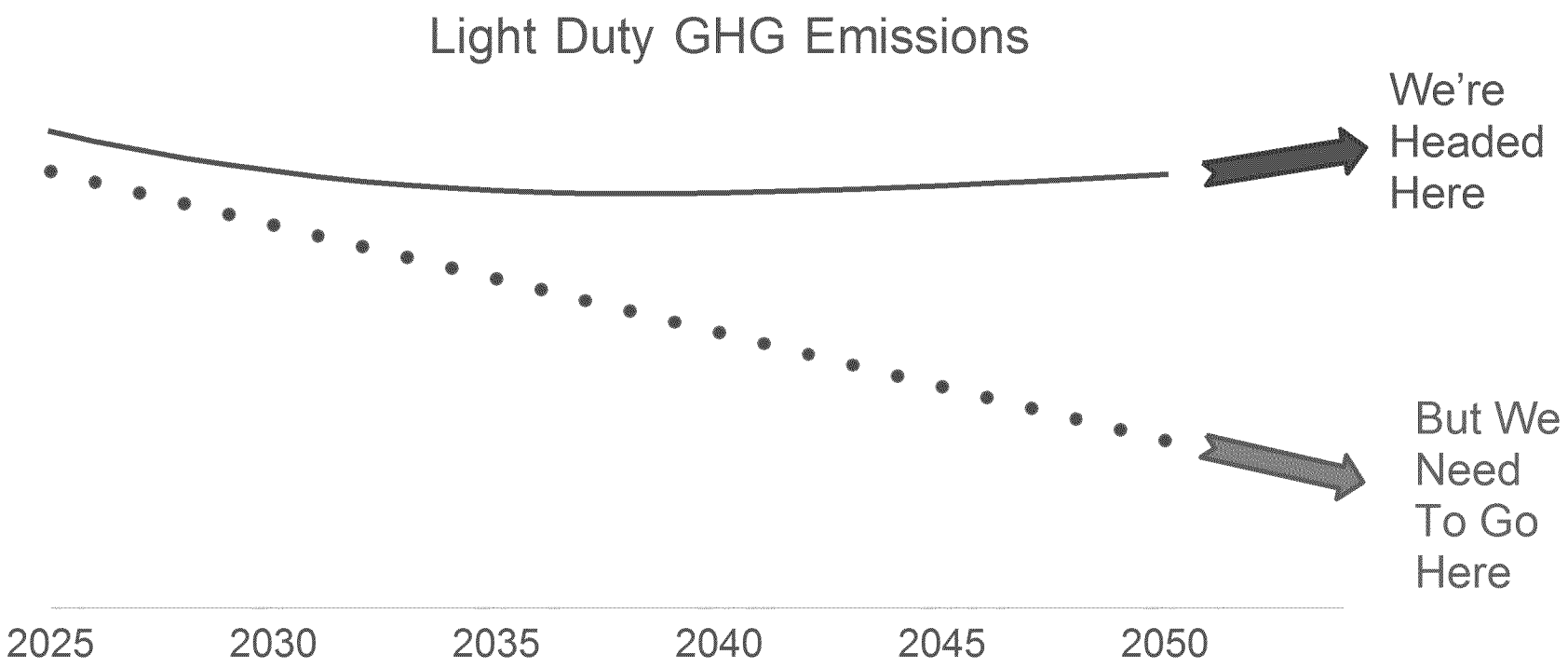
40 years



5 years

VW FOIA, EPA 06/20/2017 2017-FFP_023606

Even With Our GHG Rules



VW FOIA, EPA 06/20/2017 2017-FFP_023607

Imagination

Determination

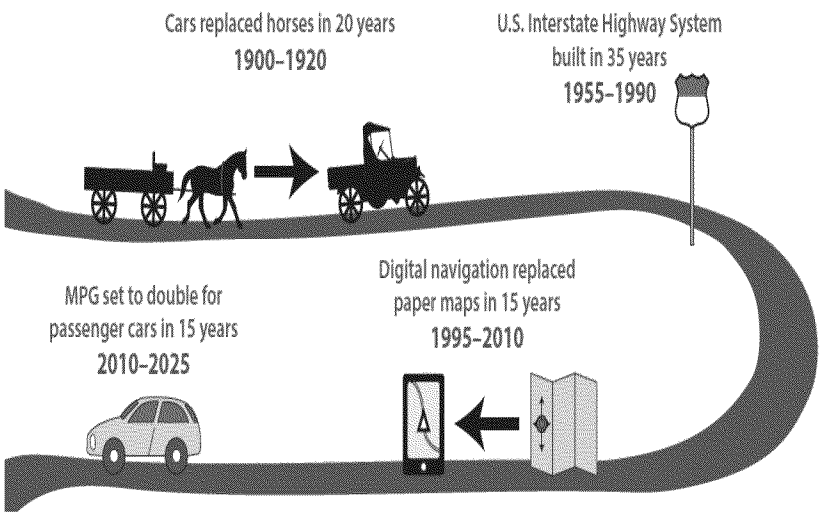
Patience

Cooperation

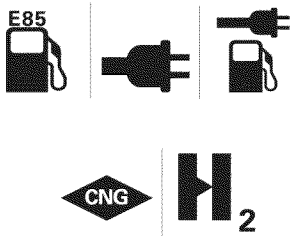
VW FOIA, EPA 06/20/2017 2017-FFP_023608

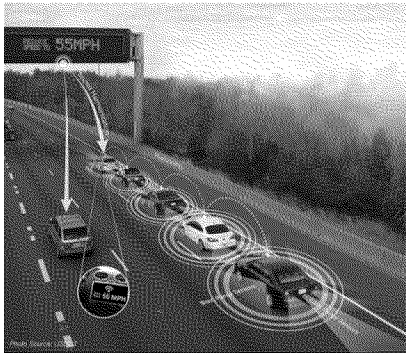
We Have the Imagination

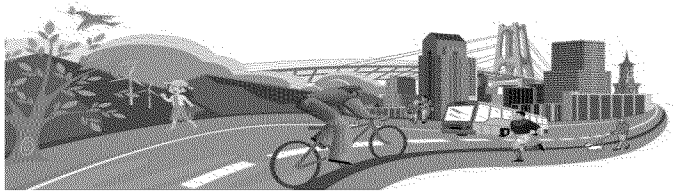
WE'VE DONE BIG THINGS



WE CAN DO BIG THINGS

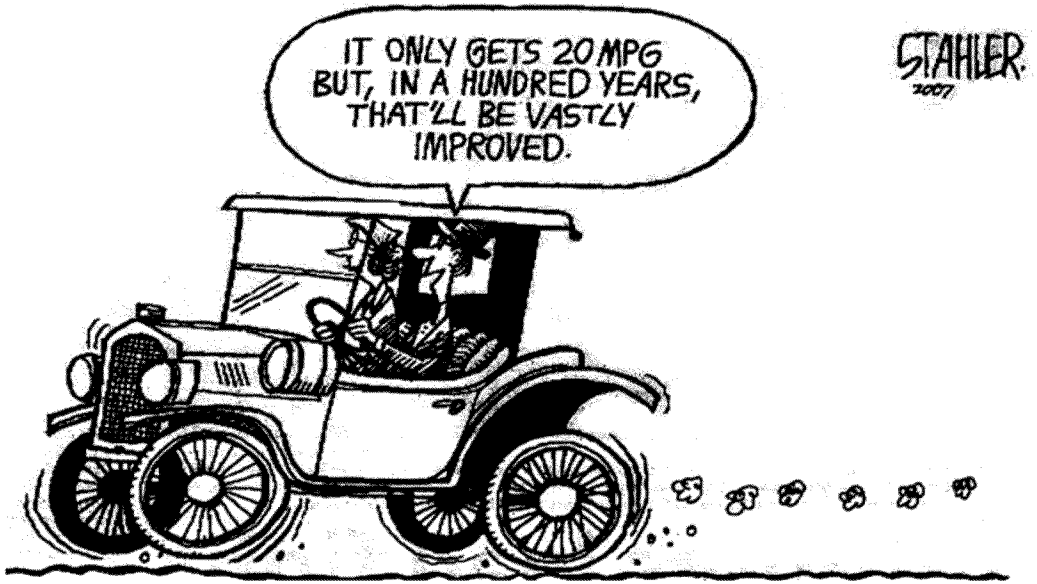






VW FOIA, EPA 06/20/2017 2017-FFP_023609

Auto Industry will change more in the next 10 years than in the last 100



"Regulatory and marketplace demands with respect to ***fuel efficiency****, connectivity, and safety … may well herald a new* ***golden age of automotive innovation****"*

BCG: Accelerating Innovation: New Challenges for Automakers (January 2014)

VW FOIA, EPA 06/20/2017 2017-FFP_023610

What does the future hold …
Empty Shelf or Smorgasbord?

"*Yet maintaining the current pace of emissions reductions will be challenging because automakers have exhausted available technologies to reduce emissions, leaving "nothing sitting on the shelf*"
Alliance of Automobile Manufacturers, Automotive News, March 26, 2015

OR

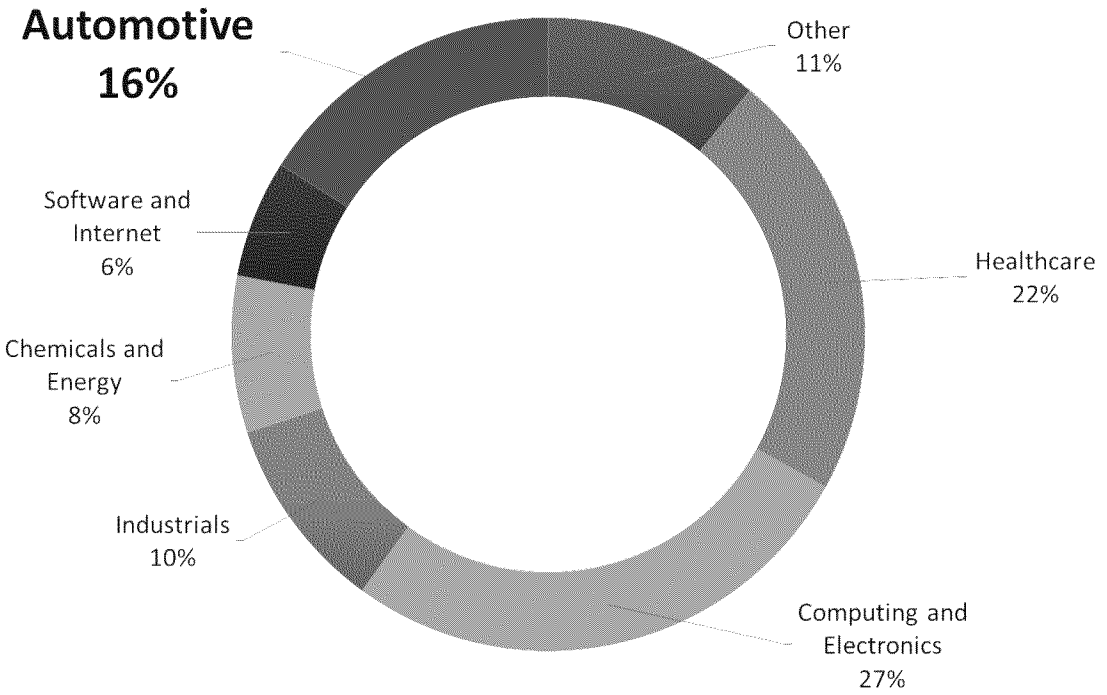
"We've got a whole smorgasbord or buffet of technology that can be implemented"

Mark Reuss, GM President of North America, Automotive News, February 5, 2011

VW FOIA, EPA 06/20/2017 2017-FFP_023611

Auto industry ranks 3rd largest sector for global R&D investment

Auto R&D Budget
> $100 Billion/year
(>$270 Million/day)



Source: Booz & Co.

VW FOIA, EPA 06/20/2017 2017-FFP_023612

Thompson Reuters lists Fuel Economy among the 5 "hottest areas" of automotive innovation

TABLE 1: HOTTEST AREAS OF AUTOMOTIVE INNOVATION

TOPIC AREA	DEFINITION	CATEGORY
Fuel Economy	Also knows as fuel efficiency, or the maximization of the distance traveled on a unit of fuel	Propulsion
Telematics	Global Positioning System technology integrated with computers and mobile communications technology in automotive navigation systems	Navigation
Autonomous Driving	Automobiles that are capable of driving themselves without input from a human passenger	Handling
Driver Assistance	Various systems such as auto braking, lane departure warning, and traffic sign recognition that help the driver become aware of and avoid road hazards	Safety & Security
Heads-Up Displays (HUDs)	Systems for displaying data from a smartphone to the windshield of an automobile so a driver can keep his/her eyes on the road	Entertainment

Table 2—*List of Hot Topic Areas, Definitions, and Corresponding Categories*
Source: *Thomson Innovation & Thomson Reuters Derwent World Patents Index*

"*Technology is most certainly playing a key role in developing next generation automobiles that will be more fuel efficient, safer, and fun to drive.*"

VW FOIA, EPA 06/20/2017 2017-FFP_023613

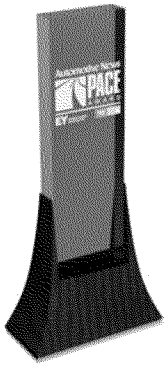
Powertrain suppliers have a key role – and opportunity – to lead innovation

"CAFE regulations are driving just about every innovation activity [in the automotive industry]."
Andy Pontius, Faurecia Chief Technologist, SAE Automotive Engineering, July 2015

Automotive News PACE AWARD

EY Building a better working world

TRC Transportation Research Center Inc.



7th Annual GLOBAL AUTOMOTIVE INNOVATION CHALLENGE

sponsored by SAE, MIT Alliance of MI, and NextEnergy

Half of the 2015 PACE awards (7 of 14) went to supplier innovations to improve fuel economy

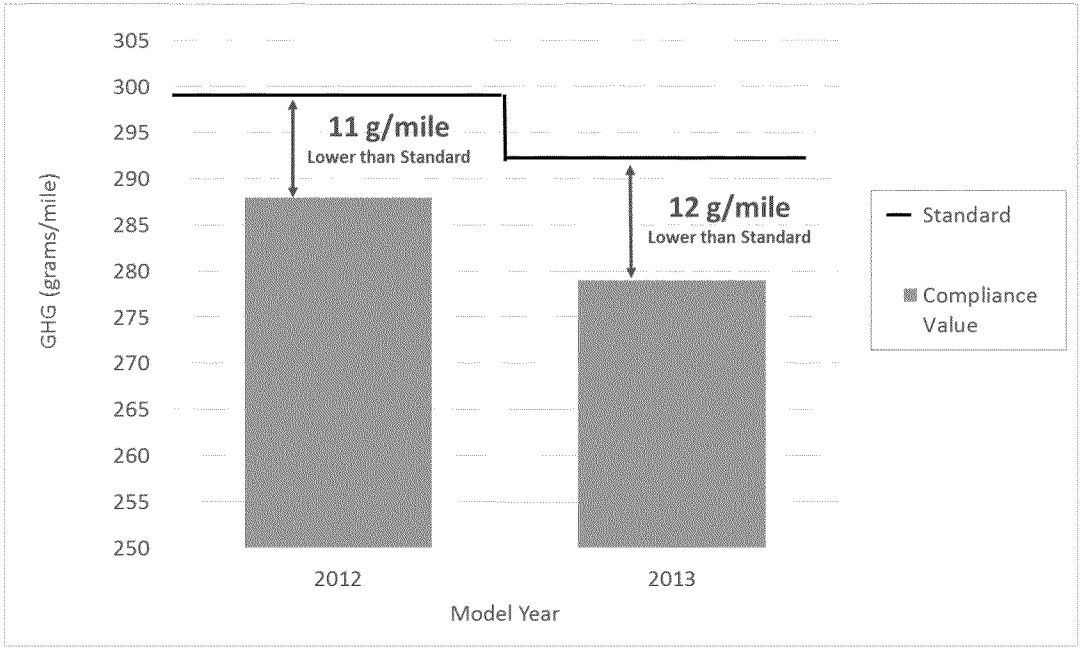
> "*A new level of efficiency is being achieved with basic science -- new materials and electronics*"
> J. Ferron, Director of Judging, PACE Awards

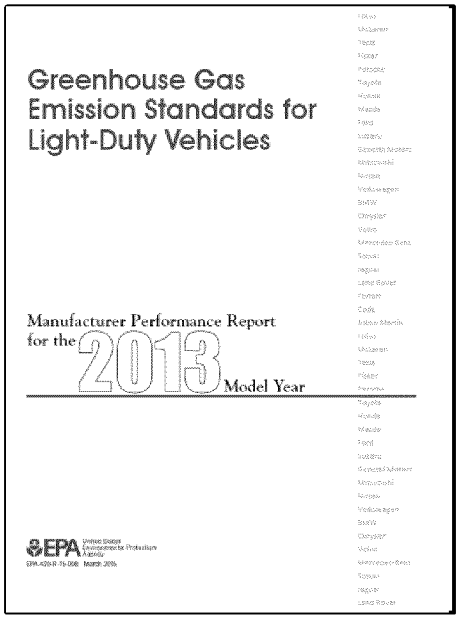
Half of the Global Automotive Innovation Challenge awards (6 of 12) were also related to fuel economy technologies

VW FOIA, EPA 06/20/2017 2017-FFP_023614

GHG Compliance … Good News So Far

- Automakers beat standards first two years
- Widespread use of credit flexibilities

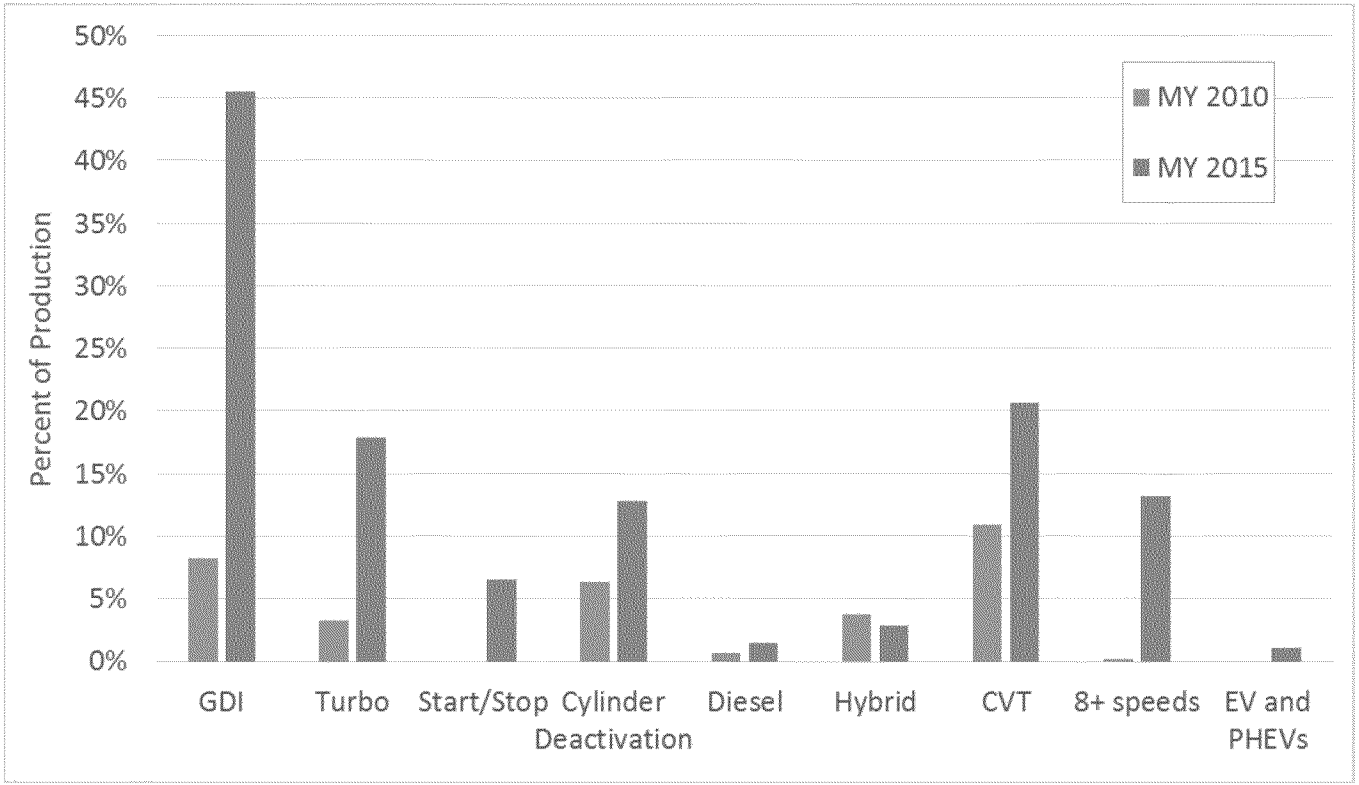



Greenhouse Gas Emission Standards for Light-Duty Vehicles

Manufacturer Performance Report for the 2013 Model Year

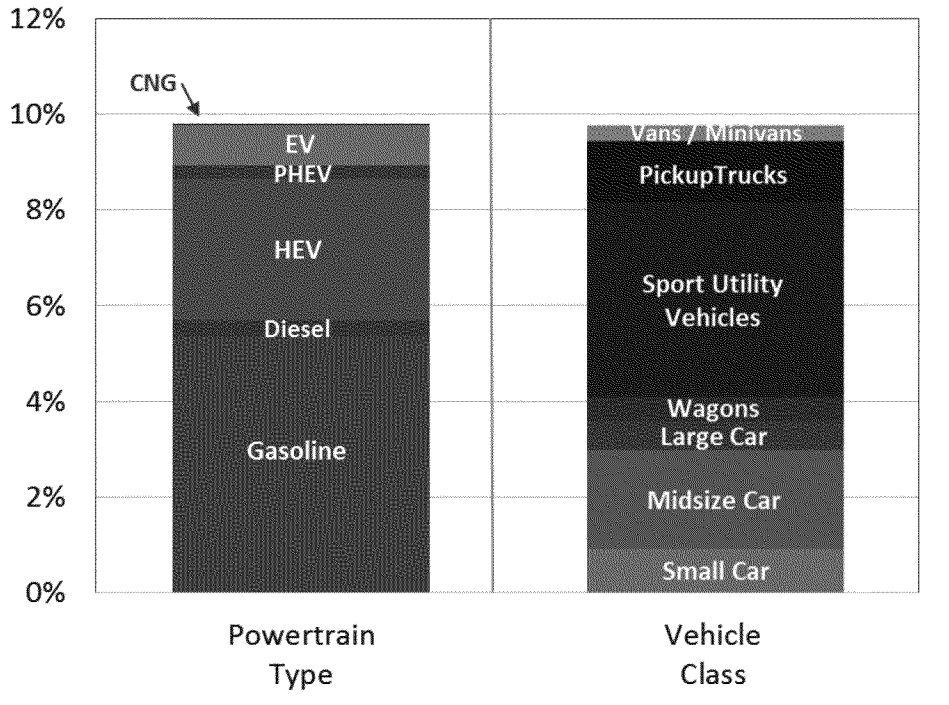
EPA

Manufacturers are aggressively adopting technology

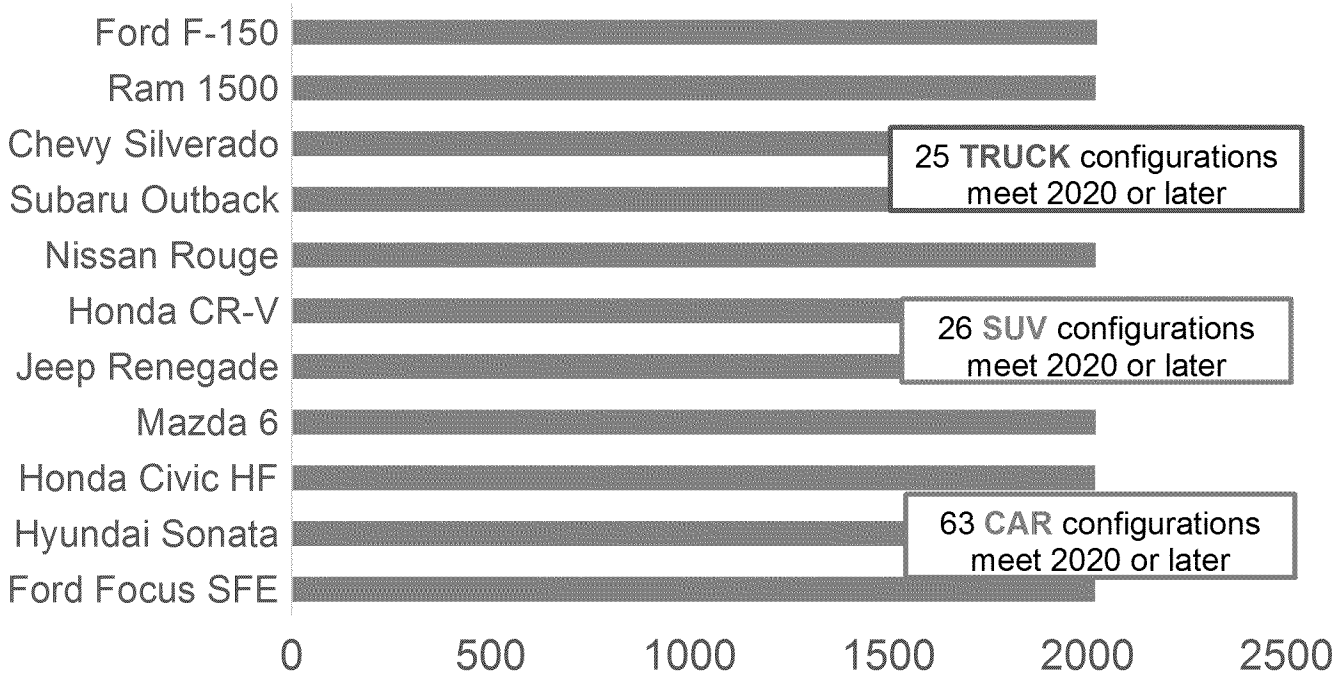


Vehicles are meeting future standards -- with mostly gasoline powertrains, across segments

MY2015 Fleet Volume That Meets MY2020 Standards



Many of today's top-selling vehicles* can already meet future standards



*At least one variant of vehicle model

VW FOIA, EPA 06/20/2017 2017-FFP_023618

Vehicles are meeting future standards with a variety of technologies

		Trucks			SUVs				Cars			
		Ford F-150	Ram 1500	Chevy Silverado	Subaru Outback	Nissan Rogue	Honda CR-V	Jeep Renegade	Mazda 6	Honda Civic HF	Hyundai Sonata	Ford Focus SFE
Engine	Diesel		X									
	Turbocharging	X						X			X	X
	High Compression Atkinson								X			
	GDI	X		X			X		X		X	X
	Cylinder Deactivation			X								
	Stop-start	X										
Transmission	8+ Speed Transmissions		X									
	CVT				X	X	X			X		
Road Loads	Mass Reduction*	X					X		X			
	Tires**		X			X	X		X	X	X	
	Aero**	X	X	X							X	X

*compared to MY2008 curb weight
** Top 25% of class + other active/passive features

VW FOIA, EPA 06/20/2017 2017-FFP_023619

NAS Report on Fuel Economy Technologies

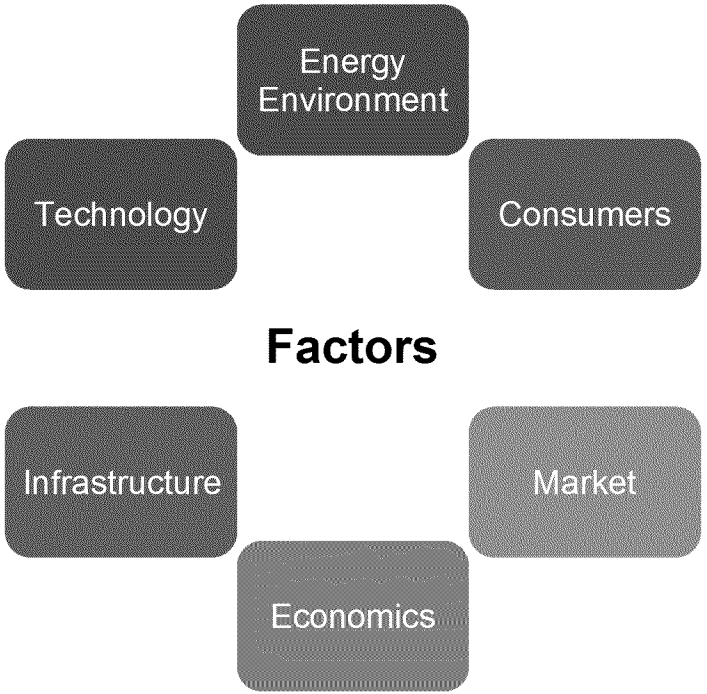
The National Academies of SCIENCES · ENGINEERING · MEDICINE

- **Comprehensive study – good early input to MTE process**
- **Consistent with the Agencies' 2012 rule analysis, affirmed that 2025 standards can be met through advanced gasoline vehicle technologies**
- **Many recommendations in line with our research plan already underway, others help prioritize**

VW FOIA, EPA 06/20/2017 2017-FFP_023620

Midterm Evaluation – Overview

- **Technical review of longer term standards for 2022-2025**
- **In coordination with NHTSA and CARB**
- **EPA's decision could go one of 3 ways:**
  - Standards remain same; more stringent; less stringent



VW FOIA, EPA 06/20/2017 2017-FFP_023621

Midterm Evaluation – Technology Assessment

- **Advanced technology assessment**
- **Mass reduction feasibility/cost study**
- **Cost teardowns**
- **Modeling tools**
- **Collaboration: NHTSA, CARB, DOE, Canada**

VW FOIA, EPA 06/20/2017 2017-FFP_023622

Midterm Evaluation – Powertrain Benchmarking

- Testing 20+ vehicles/engines across a wide range of powertrains and segments
  - Cars, SUVs, pickups
  - Naturally aspirated and boosted engines
  - Gasoline and diesel
  - I4 and V6 engines
  - 6 and 8+ speed AT/DCT transmissions and CVTs

VW FOIA, EPA 06/20/2017 2017-FFP_023623

Midterm Evaluation – Market Research

- Vehicle sales
- Fleet mix changes (cars v. trucks)
- Technology penetration in fleet
- Consumer satisfaction surveys
- Automotive reviews

VW FOIA, EPA 06/20/2017 2017-FFP_023624

Automotive Reviewers Like Fuel Economy Technologies

- **EPA study finds 4 out of 5 mentions of MY 2014 FE technologies in auto reviews have positive or neutral ratings**
- **For all technologies, positives outweigh negatives**
- **Most positives (80-100%)**
  - active aero, mass reduction, cylinder deactivation, LEDs, GDI, turbocharging
- **Least positive (but still >50%)**
  - CVTs and stop-start
- **But no universal issues with technologies -- some manufacturers implementing better than others**

edmunds.com

CAR AND DRIVER

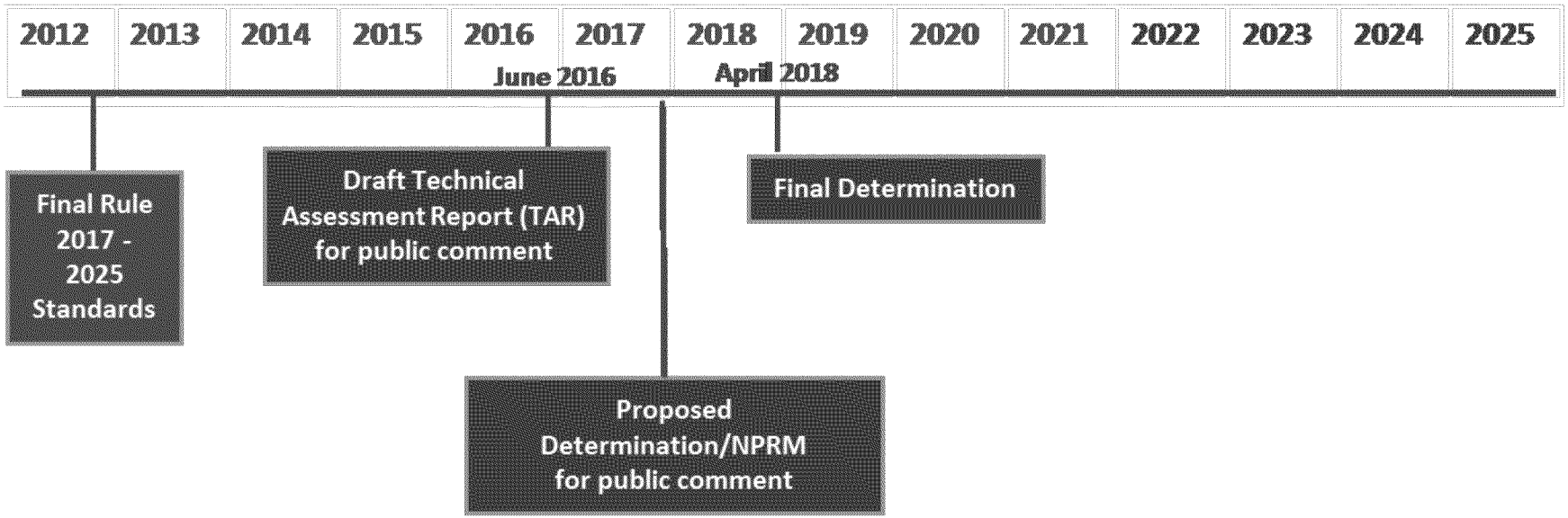
AutoTrader

Automobile magazine

MOTOR TREND

Consumer Reports

Midterm Evaluation Timeline



VW FOIA, EPA 06/20/2017 2017-FFP_023626

Going forward

- **Extensive stakeholder outreach**
- **Data-driven**
- **Transparent: we'll share results of technical work along the way**

www.epa.gov/otaq/climate/mte.htm

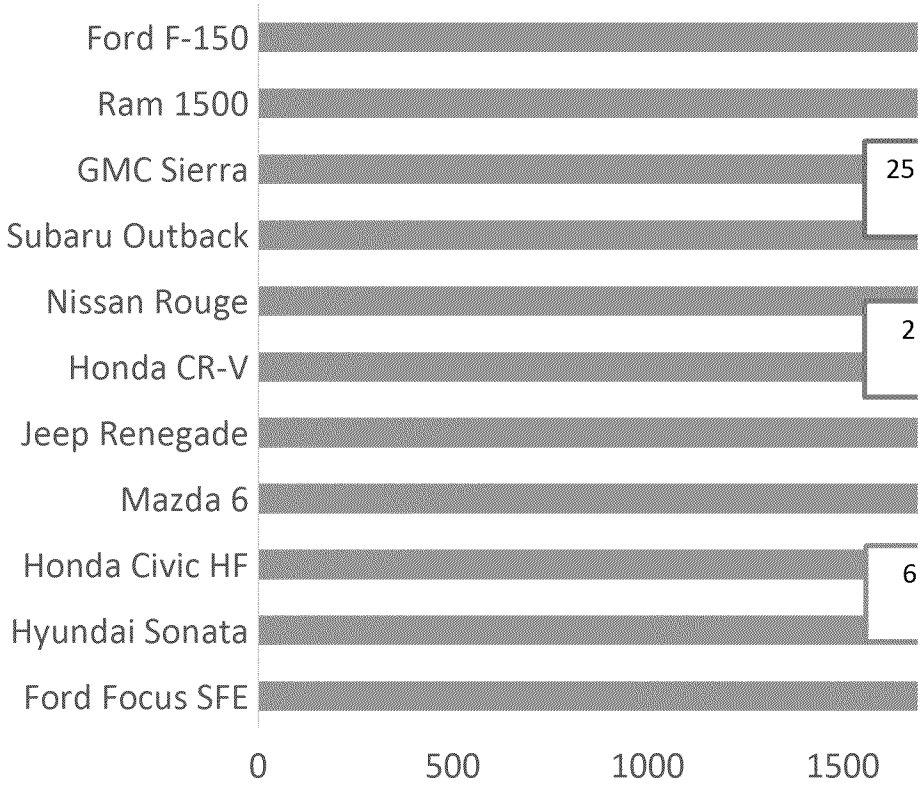
VW FOIA, EPA 06/20/2017 2017-FFP_023627

"There is such a thing as being too late when it comes to climate change."

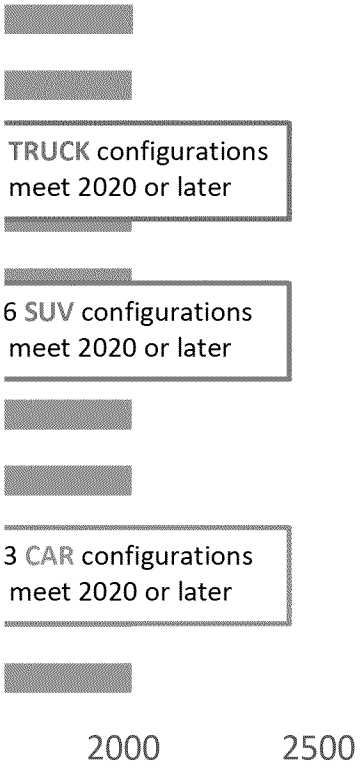
- President Obama, August 3, 2015

Ford Focus SFE	2020
Hyundai Sonata	2020
Honda Civic HF	2020
Mazda 6	2021
Jeep Renegade	2020
Honda CR-V	2021
Nissan Rouge	2021
Subaru Outback	2021
GMC Sierra	2021
Ram 1500	2021
Ford F-150	2024

		Trucks			SUVs			
		Ford F-150	Ram 1500	GMC Sierra	Subaru Outback	Nissan Rouge	Honda CR-V	Jeep Renegade
Engine	Diesel		X					
	Turbocharging	X						X
	High Compression Atkinson							
	GDI	X		X			X	
	Cylinder Deactivation			X				
	Start-Stop	X						
Trans	8+ Speed Transmissions		X					
	CVT				X	X	X	
Body	Mass Reduction	X					X	?
	Tires	?	X			X	X	?
	Aero	?	X	X				?



Cars			
Mazda 6	Honda Civic HF	Hyundai Sonata	Ford Focus SFE
		X	X
X			
X		X	X
	X		
X			
X	X	X	
		X	X


TRUCK configurations meet 2020 or later
6 SUV configurations meet 2020 or later
3 CAR configurations meet 2020 or later
2000
2500

Model Year	anufactur	Vehicle	Fuel Economy (combined unadjusted)	Tailpipe CO_2 (combined unadjusted)	Footprint (ft^2)	Powertrain Type	Engine Displacement
2015	Honda	CIVIC	41.1800	163	43.4	CNG	1.8
2015	BMW	328d	49.5715	205	46.9	Diesel	2.0
2015	BMW	X5 xDrive 35d	36.1134	282	52.0	Diesel	3.0
2015	Ram	1500 4X2 - Crew Cab, 6'4" Box	30.3427	336	70.9	Diesel	3.0
2015	Ram	1500 4X2 - Crew Cab, 6'4" Box	28.9989	351	70.9	Diesel	3.0
2015	Ram	1500 4X2 - Regular Cab, 8'0" Box	30.3427	336	66.6	Diesel	3.0
2015	Ram	1500 4X4 - Regular Cab, 8'0" Box	28.9989	351	66.6	Diesel	3.0
2015	Volkswagee	e-Golf		0	42.4	EV	
2015	Ford	Focus Electric FWD		0	43.5	EV	
2015	Tesla	S (60 kWh)		0	53.5	EV	
2015	Tesla	S (85 kWh)		0	53.5	EV	
2015	Tesla	S AWD		0	53.5	EV	
2015	Tesla	S AWD - 85D		0	53.5	EV	
2015	Tesla	S AWD - P85D		0	53.5	EV	
2015	Mercedes-	B-Class Electric Drive		0	45.0	EV	
2015	Nissan	Leaf		0	44.7	EV	
2015	Fiat	500e		0	34.7	EV	
2015	Kia	Soul Electric		0	43.3	EV	
2015	BYD	e6		0	44.6	EV	
2015	Chevrolet	Spark EV		0	35.8	EV	
2015	BMW	i3 BEV		0	43.5	EV	
2015	Smart	fortwo elec. drive (conv.)		0	26.8	EV	
2015	Smart	fortwo elec. drive (coupe)		0	26.8	EV	
2015	Hyundai	Tucson Fuel Cell		0	45.0	Fuel Cell	
2015	Honda	CIVIC HF	47.5222	187	43.4	Gasoline	1.8
2015	Ford	Focus SFE FWD	46.9885	189	43.5	Gasoline	1.0
2015	Mitsubishi	MIRAGE	54.8785	162	37.5	Gasoline	1.2
2015	Mitsubishi	MIRAGE	50.5419	176	37.5	Gasoline	1.2
2015	Hyundai	Sonata	42.4116	210	48.3	Gasoline	1.6
2015	Nissan	SENTRA FE+	46.0818	193	44.4	Gasoline	1.8
2015	Mercedes-	GLA 45 AMG 4MATIC	33.5142	265	49.0	Gasoline	2.0
2015	Mercedes-	GLA 250	38.2124	233	49.0	Gasoline	2.0
2015	Scion	iQ	52.2891	170	31.6	Gasoline	1.3
2015	Honda	CR-V 4WD	37.9986	234	44.4	Gasoline	2.4
2015	Subaru	OUTBACK	37.4474	237	45.7	Gasoline	2.5
2015	Jeep	Renegade 4x4	36.7030	242	42.7	Gasoline	1.4
2015	Nissan	ROGUE AWD	36.6364	243	46.4	Gasoline	2.5
2015	Mercedes-	GLA 250 4MATIC	35.9721	247	49.0	Gasoline	2.0
2015	Mercedes-	GLA 250 4MATIC	35.9721	247	49.0	Gasoline	2.0

2015	Ram	1500 4X2 - Regular Cab, 8'0" Box	25.6217	347	66.6	Gasoline	3.6
2015	Ram	1500 4X2 - Regular Cab, 8'0" Box	25.6217	347	66.6	Gasoline	3.6
2015	GMC	C15 SIERRA 2WD CAB CHASSIS	24.8429	358	72.5	Gasoline	4.3
2015	GMC	C15 SIERRA 2WD Crew Cab, Sho	25.8887	343	68.0	Gasoline	4.3
2015	GMC	C15 SIERRA 2WD Crew Cab, Sta	25.8887	343	72.5	Gasoline	4.3
2015	Chevrolet	C15 SILVERADO 2WD CAB CHA	24.8429	358	72.5	Gasoline	4.3
2015	Chevrolet	C15 SILVERADO 2WD Crew Cab	25.8615	344	68.0	Gasoline	4.3
2015	Chevrolet	C15 SILVERADO 2WD Crew Cab	25.8615	344	72.5	Gasoline	4.3
2015	Ford	F150 PICKUP 2WD	28.4590	312	76.8	Gasoline	2.7
2015	Ford	F150 PICKUP 2WD	28.4590	312	73.6	Gasoline	2.7
2015	Ford	F150 PICKUP 2WD	28.4590	312	68.1	Gasoline	2.7
2015	Ford	F150 PICKUP 2WD	28.4590	312	66.2	Gasoline	2.7
2015	Ford	F150 PICKUP 2WD	25.5817	347	76.8	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD	25.5817	347	73.6	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD	25.5817	347	68.1	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD	25.5817	347	66.2	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD FFV	26.5552	335	68.1	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD FFV	26.5552	335	66.2	Gasoline	3.5
2015	Ford	F150 PICKUP 4WD	25.5058	348	68.1	Gasoline	2.7
2015	Ford	F150 PICKUP 4WD	25.5058	348	66.2	Gasoline	2.7
2015	Ford	F150 PICKUP 4WD FFV	24.9052	357	68.1	Gasoline	3.5
2015	Smart	fortwo (Convertible)	50.2830	177	26.8	Gasoline	1.0
2015	Smart	fortwo (COUPE)	50.2830	177	26.8	Gasoline	1.0
2015	Chevrolet	City Express Cargo Van	34.9238	254	49.6	Gasoline	2.0
2015	Ram	Promaster City	31.4586	282	54.9	Gasoline	2.4
2015	Nissan	NV200 Cargo Van	34.9238	254	47.9	Gasoline	2.0
2015	Nissan	NV200 NYC Taxi	34.1029	261	47.9	Gasoline	2.0
2015	Lexus	CT 200h	70.9573	125	42.7	HEV	1.8
2015	Volkswage	Jetta Hybrid	60.7663	146	44.0	HEV	1.4
2015	Honda	CIVIC HYBRID	63.7285	139	43.4	HEV	1.5
2015	Toyota	Prius c	70.7980	126	40.6	HEV	1.5
2015	Ford	C-MAX Hybrid FWD	54.9862	162	43.8	HEV	2.0
2015	Honda	Accord	69.8931	127	47.6	HEV	2.0
2015	Toyota	AVALON HYBRID	55.2009	161	47.7	HEV	2.5
2015	Lexus	ES 300h	55.2009	161	48.0	HEV	2.5
2015	Lexus	GS 450h	41.6347	213	48.5	HEV	3.5
2015	Infiniti	Q70 HYBRID	42.0623	211	49.1	HEV	3.5
2015	Toyota	CAMRY HYBRID LE	57.4438	155	47.2	HEV	2.5
2015	Toyota	CAMRY HYBRID XLE/SE	54.8426	162	47.2	HEV	2.5
2015	Kia	Optima HYBRID	51.5229	172	48.2	HEV	2.4
2015	Kia	Optima HYBRID EX	50.3669	176	48.2	HEV	2.4
2015	Toyota	Prius	70.9573	125	44.2	HEV	1.8
2015	Toyota	Prius v	58.6617	151	46.1	HEV	1.8
2015	Nissan	PATHFINDER Hybrid 2WD	36.6873	242	52.1	HEV	2.5
2015	Nissan	PATHFINDER Hybrid 4WD	35.4866	250	52.1	HEV	2.5

2015	Audi	Q5 Hybrid	34.0480	261	48.8	HEV	2.0
2015	Infiniti	QX60 HYBRID AWD	36.1667	246	48.7	HEV	2.5
2015	Toyota	HIGHLANDER HYBRID AWD	38.7150	230	48.9	HEV	3.5
2015	Toyota	HIGHLANDER HYBRID AWD LE	38.8724	229	48.9	HEV	3.5
2015	Lexus	NX 300h	44.8402	198	45.1	HEV	2.5
2015	Lexus	NX 300h AWD	43.5160	204	45.1	HEV	2.5
2015	Lexus	RX 450h	40.3557	220	48.0	HEV	3.5
2015	Lexus	RX 450h AWD	38.5680	230	48.0	HEV	3.5
2015	Subaru	XV CROSSTREK	38.5928	230	43.2	HEV	2.0
2015	Subaru	XV CROSSTREK HYBRID	42.4665	209	43.2	HEV	2.0
2015	Honda	CR-Z	51.1079	174	39.5	HEV	1.5
2015	Chevrolet	Volt		51	45.1	PHEV	1.4
2015	Porsche	Panamera S E-Hybrid		161	52.2	PHEV	3.0
2015	Ford	FUSION Energi Plug-in Hybrid FW	53.3195	87	48.7	PHEV	2.0
2015	Ford	C-MAX Energi Plug-In Hybrid FWD		87	43.8	PHEV	2.0
2015	Toyota	PRIUS Plug-in Hybrid	69.7528	110	44.2	PHEV	1.8
2015	Porsche	Cayenne S e-Hybrid		183	51.8	PHEV	3.0
2015	Cadillac	ELR		51	46.2	PHEV	1.4
2015	BMW	i8		125	48.5	PHEV	1.5
2015	BMW	i3 REX		4	43.5	PHEV	
2015	Porsche	918 Spyder		181	48.2	PHEV	4.6

Transmision	Vehicle Class	Car/Truck	Superceded		Sales	
Auto(A5)	Compact Cars	C	0			
Auto(S8)	Compact Cars	C	0			
Auto(S8)	Sport Utility Vehicles	T	0			
Auto(A8)	Standard Pick-up Trucks	T	0			
Auto(A8)	Standard Pick-up Trucks	T	0			
Auto(A8)	Standard Pick-up Trucks	T	0			
Auto(A8)	Standard Pick-up Trucks	T	0			
Auto(A1)	Compact Cars	C	0			
Auto(A1)	Compact Cars	C	0			
Auto(A1)	Large Cars	C	0			
Auto(A1)	Large Cars	C	0			
Auto(A1)	Large Cars	C	0			
Auto(A1)	Large Cars	C	0			
Auto(A1)	Large Cars	C	0			
Auto(A1)	Midsize Cars	C	0			
Auto(A1)	Midsize Cars	C	0			
Auto(A1)	Minicompact Cars	C	0			
Auto(A1)	Small Station Wagons	C	0			
Auto(A1)	Subcompact Cars	C	0			
Auto(A1)	Subcompact Cars	C	0			
Auto(A1)	Subcompact Cars	C	0			
Auto(A1)	Two Seaters	C	0			
Auto(A1)	Two Seaters	C	0			
Auto(A1)	Sport Utility Vehicles	C	0			
Auto(AV)	Compact Cars	C	0			
Manual(M6	Compact Cars	C	0			
Auto(AV)	Compact Cars	C	0			
Manual(M5	Compact Cars	C	0			
Auto(AM7)	Large Cars	C	0			
Auto(AV)	Midsize Cars	C	0			
Auto(AM7)	Midsize Station Wagons	T	0			
Auto(AM7)	Midsize Station Wagons	T	0			
Auto(AV)	Minicompact Cars	C	0			
Auto(AV)	Sport Utility Vehicles	T	0			
Auto(AV-S	Sport Utility Vehicles	T	0			
Manual(M6	Sport Utility Vehicles	T	0			
Auto(AV)	Sport Utility Vehicles	T	0			
Auto(AM7)	Sport Utility Vehicles	T	0			
Auto(AM7)	Sport Utility Vehicles	T	0			

Ex. 4 - CBI

Auto(A8)	Standard Pick-up Trucks	T	0	
Auto(A8)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(S6)	Standard Pick-up Trucks	T	0	
Auto(A6)	Standard Pick-up Trucks	T	0	
Auto(AM5)	Two Seaters	C	0	**Ex. 4 - CBI**
Auto(AM5)	Two Seaters	C	0	
Auto(AV)	Vans	T	0	
Auto(A9)	Vans	T	0	
Auto(AV)	Vans	T	0	
Auto(AV)	Vans	T	0	
Auto(AV)	Compact Cars	C	0	
Auto(AM-S	Compact Cars	C	0	
Auto(AV)	Compact Cars	C	0	
Auto(AV)	Compact Cars	C	0	
Auto(AV)	Large Cars	C	0	
Auto(AV)	Midsize Cars	C	0	
Auto(AV-S	Midsize Cars	C	0	
Auto(AV-S	Midsize Cars	C	0	
Auto(AV-S	Midsize Cars	C	0	
Auto(S7)	Midsize Cars	C	0	
Auto(AV)	Midsize Cars	C	0	
Auto(AV)	Midsize Cars	C	0	
Auto(AM6)	Midsize Cars	C	0	
Auto(AM6)	Midsize Cars	C	0	
Auto(AV)	Midsize Cars	C	0	
Auto(AV)	Midsize Station Wagons	C	0	
Auto(AV)	Sport Utility Vehicles	T	0	
Auto(AV)	Sport Utility Vehicles	T	0	

Auto(S8)	Sport Utility Vehicles	T	0
Auto(AV-S	Sport Utility Vehicles	T	0
Auto(AV-S	Sport Utility Vehicles	T	0
Auto(AV-S	Sport Utility Vehicles	T	0
Auto(AV-S	Sport Utility Vehicles	C	0
Auto(AV-S	Sport Utility Vehicles	T	0
Auto(AV-S	Sport Utility Vehicles	T	0
Auto(AV-S	Sport Utility Vehicles	T	0
Auto(AV-S	Sport Utility Vehicles	T	0
Auto(AV-S	Sport Utility Vehicles	T	0
Auto(AV-S	Two Seaters	C	0
Auto(AV)	Compact Cars	C	0
Auto(AM-S	Large Cars	C	0
Auto(AV)	Midsize Cars	C	0
Auto(AV)	Midsize Cars	C	0
Auto(AV)	Midsize Cars	C	0
Auto(AM8)	Sport Utility Vehicles	T	0
Auto(AV)	Subcompact Cars	C	0
Auto(A6)	Subcompact Cars	C	0
Auto(A1)	Subcompact Cars	C	0
Auto(AM-S	Two Seaters	C	0

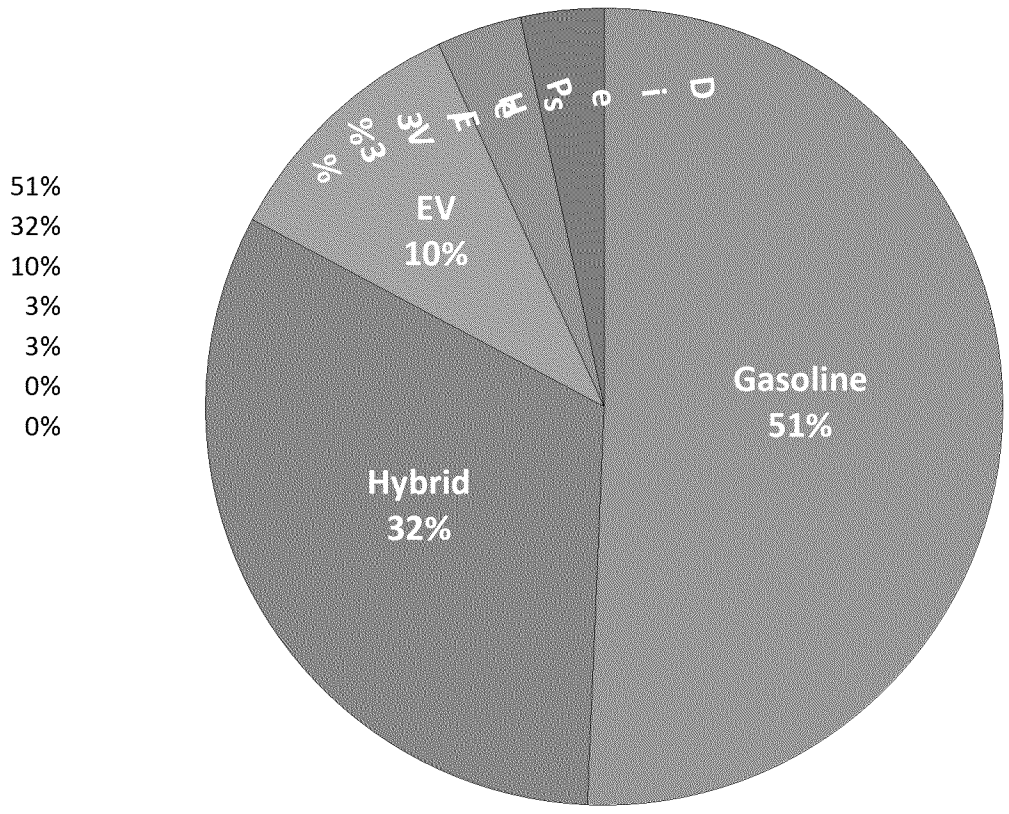
Ex. 4 - CBI

Full Name		
Honda CIVIC	Compact Cars	
BMW 328d	Large Cars	
BMW X5 xDrive 35d	Midsize Cars	
Ram 1500 4X2 - Crew Cab, 6'4" Box	Midsize Station Wagons	
Ram 1500 4X2 - Crew Cab, 6'4" Box	Minicompact Cars	
Ram 1500 4X2 - Regular Cab, 8'0" Box	Small Station Wagons	
Ram 1500 4X4 - Regular Cab, 8'0" Box	Sport Utility Vehicles	
Volkswagen e-Golf	Standard Pick-up Trucks	
Ford Focus Electric FWD	Subcompact Cars	
Tesla S (60 kWh)	Two Seaters	
Tesla S (85 kWh)	Vans	
Tesla S AWD		
Tesla S AWD - 85D	Gasoline	
Tesla S AWD - P85D	HEV	
Mercedes-Benz B-Class Electric Drive	EV	
Nissan Leaf	PHEV	
Fiat 500e	Diesel	
Kia Soul Electric	Fuel Cell	
BYD e6	CNG	
Chevrolet Spark EV		
BMW i3 BEV		
Smart fortwo elec. drive (conv.)		
Smart fortwo elec. drive (coupe)		
Hyundai Tucson Fuel Cell		
Honda CIVIC HF		
Ford Focus SFE FWD		
Mitsubishi MIRAGE		
Mitsubishi MIRAGE		
Hyundai Sonata		
Nissan SENTRA FE+		
Mercedes-Benz GLA 45 AMG 4MATIC		
Mercedes-Benz GLA 250		
Scion iQ		
Honda CR-V 4WD		
Subaru OUTBACK		
Jeep Renegade 4x4		
Nissan ROGUE AWD		
Mercedes-Benz GLA 250 4MATIC		
Mercedes-Benz GLA 250 4MATIC		

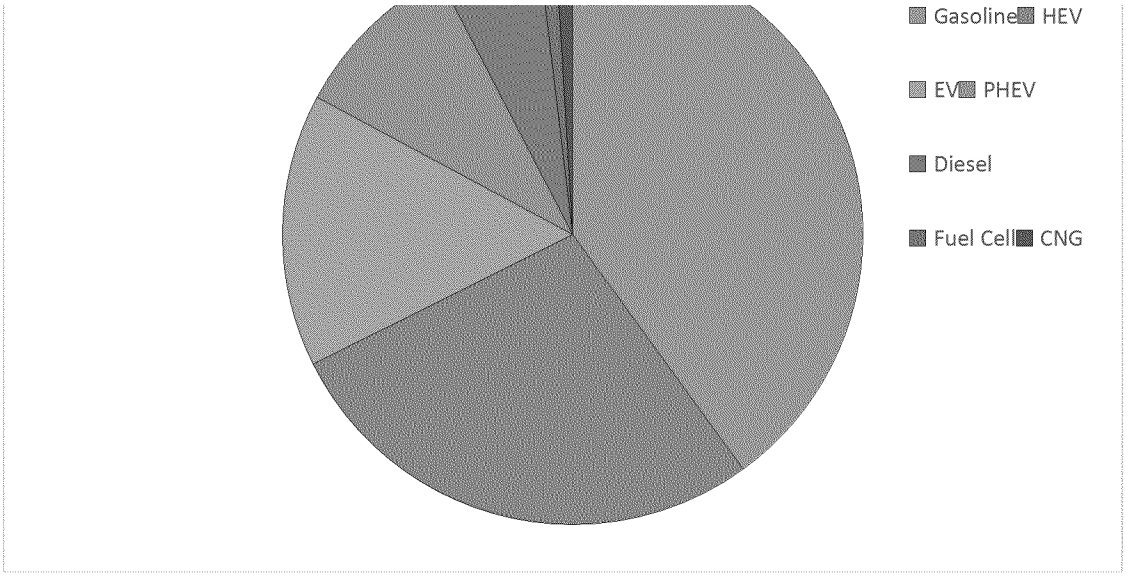
Ex. 4 - CBI

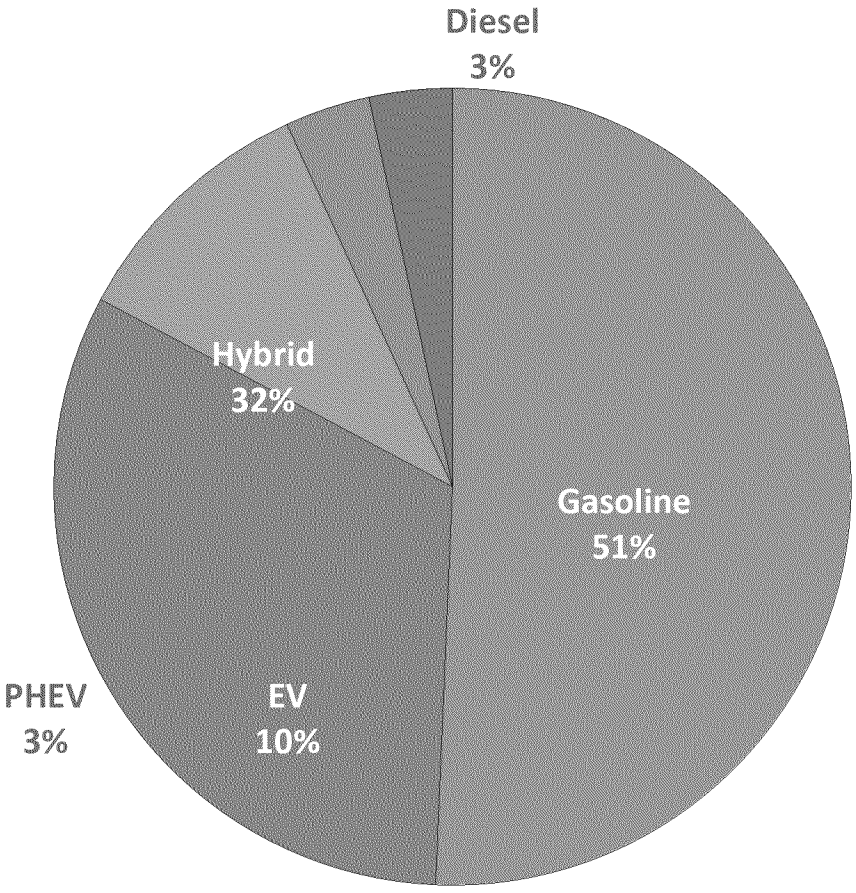
Ram 1500 4X2 - Regular Cab, 8'0" Box
Ram 1500 4X2 - Regular Cab, 8'0" Box
GMC C15 SIERRA 2WD CAB CHASSIS
GMC C15 SIERRA 2WD Crew Cab, Short Box
GMC C15 SIERRA 2WD Crew Cab, Standard Box
Chevrolet C15 SILVERADO 2WD CAB CHASSIS
Chevrolet C15 SILVERADO 2WD Crew Cab, Short Box
Chevrolet C15 SILVERADO 2WD Crew Cab, Standard Box
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD FFV
Ford F150 PICKUP 2WD FFV
Ford F150 PICKUP 4WD
Ford F150 PICKUP 4WD
Ford F150 PICKUP 4WD FFV
Smart fortwo (Convertible)
Smart fortwo (COUPE)
Chevrolet City Express Cargo Van
Ram Promaster City
Nissan NV200 Cargo Van
Nissan NV200 NYC Taxi
Lexus CT 200h
Volkswagen Jetta Hybrid
Honda CIVIC HYBRID
Toyota Prius c
Ford C-MAX Hybrid FWD
Honda Accord
Toyota AVALON HYBRID
Lexus ES 300h
Lexus GS 450h
Infiniti Q70 HYBRID
Toyota CAMRY HYBRID LE
Toyota CAMRY HYBRID XLE/SE
Kia Optima HYBRID
Kia Optima HYBRID EX
Toyota Prius
Toyota Prius v
Nissan PATHFINDER Hybrid 2WD
Nissan PATHFINDER Hybrid 4WD

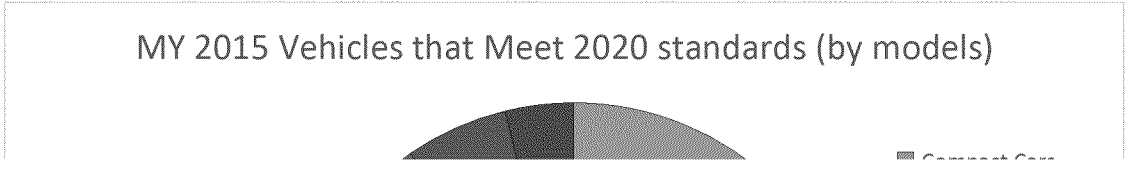
Audi Q5 Hybrid
Infiniti QX60 HYBRID AWD
Toyota HIGHLANDER HYBRID AWD
Toyota HIGHLANDER HYBRID AWD LE Plus
Lexus NX 300h
Lexus NX 300h AWD
Lexus RX 450h
Lexus RX 450h AWD
Subaru XV CROSSTREK
Subaru XV CROSSTREK HYBRID
Honda CR-Z
Chevrolet Volt
Porsche Panamera S E-Hybrid
Ford FUSION Energi Plug-in Hybrid FWD
Ford C-MAX Energi Plug-In Hybrid FWD
Toyota PRIUS Plug-in Hybrid
Porsche Cayenne S e-Hybrid
Cadillac ELR
BMW i8
BMW i3 REX
Porsche 918 Spyder

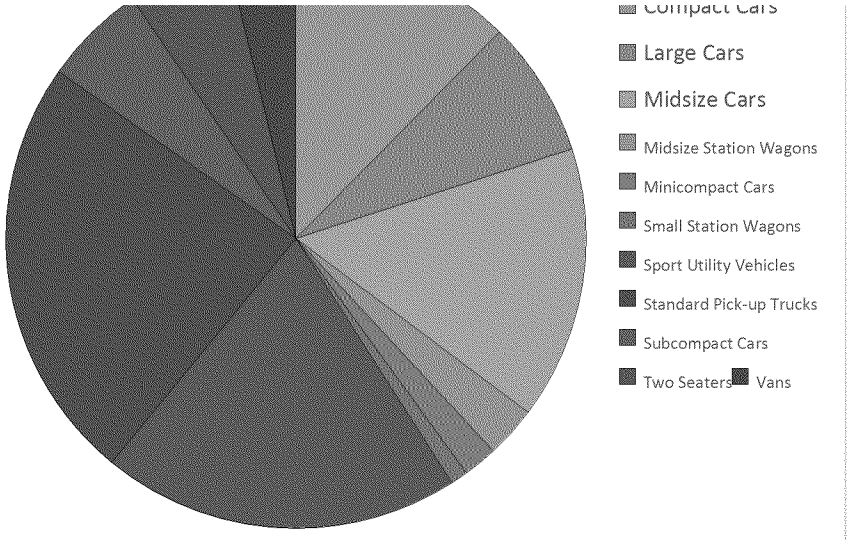


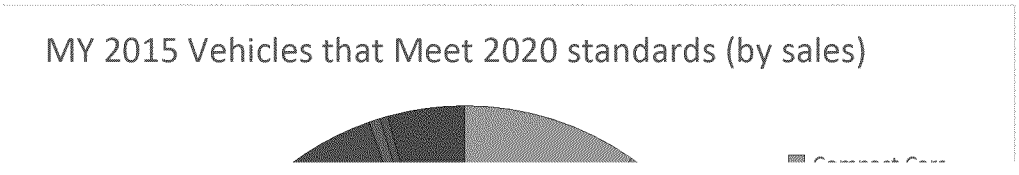
MY 2015 Vehicles that Meet 2020 standards (by models)

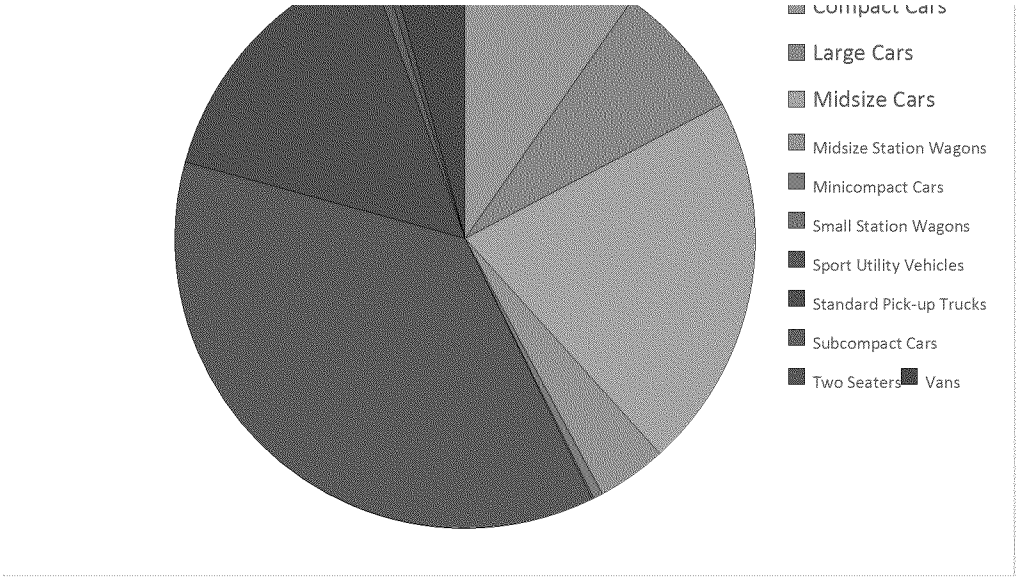

Gasoline
HEV
EV
PHEV
Diesel
Fuel Cell
CNG


Diesel
3%
Hybrid
32%
Gasoline
51%
PHEV
3%
EV
10%

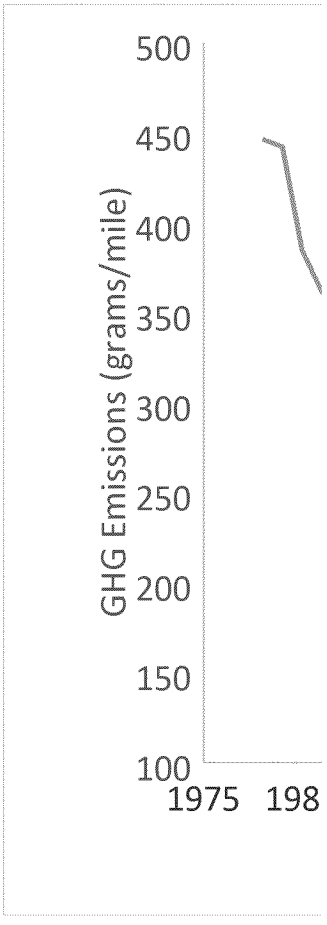

MY 2015 Vehicles that Meet 2020 standards (by models)


Compact Cars
Large Cars
Midsize Cars
Midsize Station Wagons
Minicompact Cars
Small Station Wagons
Sport Utility Vehicles
Standard Pick-up Trucks
Subcompact Cars
Two Seaters
Vans


MY 2015 Vehicles that Meet 2020 standards (by sales)


Compact Cars
Large Cars
Midsize Cars
Midsize Station Wagons
Minicompact Cars
Small Station Wagons
Sport Utility Vehicles
Standard Pick-up Trucks
Subcompact Cars
Two Seaters
Vans

	car	truck	combined car	truck	combined	
1975						
1976						
1977						
1978			19.9		446.58291	
1979			20.1		442.13930	
1980			23.1		384.71861	
1981			24.6		361.26016	
1982			25.1		354.06375	
1983			24.8		358.34677	
1984			25		355.48	
1985			25.4		349.88189	
1986			25.9		343.12741	
1987			26.2		339.19847	
1988			26		341.80769	
1989			25.6		347.14844	
1990			25.4		349.88189	
1991			25.6		347.14844	
1992			25.1		354.06375	
1993			25.2		352.65873	
1994			24.7		359.79757	
1995			24.9		356.90763	
1996			24.9		356.90763	
1997			24.6		361.26016	
1998			24.7		359.79757	
1999			24.5		362.73469	
2000			24.8		358.34677	
2001			24.5		362.73469	
2002			24.7		359.79757	
2003			25.1		354.06375	
2004			24.6		361.26016	
2005			25.4		349.88189	
2006			25.8		344.45736	
2007			26.6		334.09774	
2008			27.1		327.93358	
2009			29		306.44828	
2010			29.3		303.31058	
2011			29		306.44828	
2012				249	348	288
2013				241	339	279
2014				247	326	276
2015				236	312	263



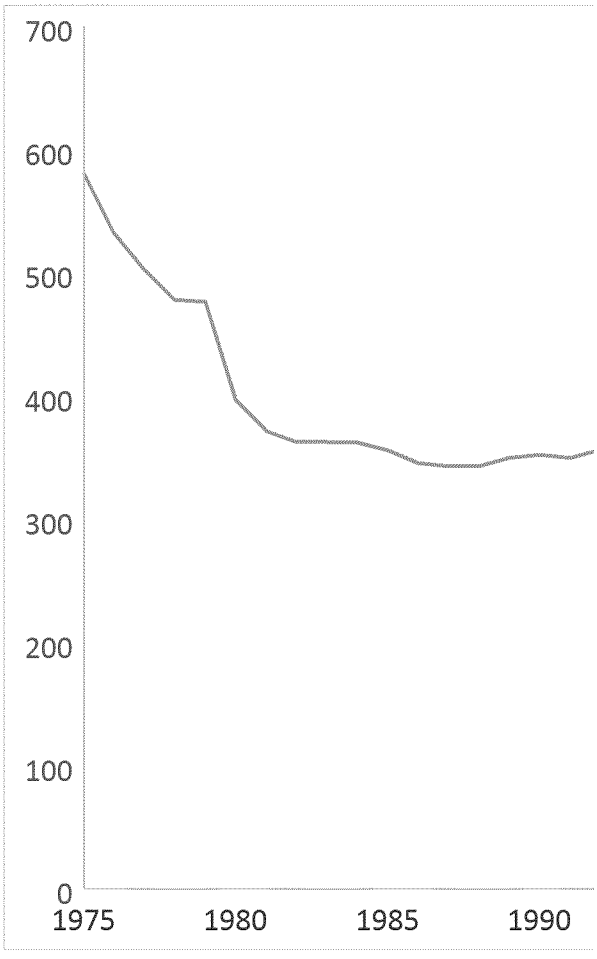
2013 compliance report

2012 FRM Table I.B.2-4

2016			225	298	250
2017			212	295	243
2018			202	286	232
2019			191	277	222
2020			182	269	213
2021			172	249	199
2022			164	237	190
2023			157	225	180
2024			150	214	171
2025			143	203	163

2016 FRM Table III-2, 3, 4

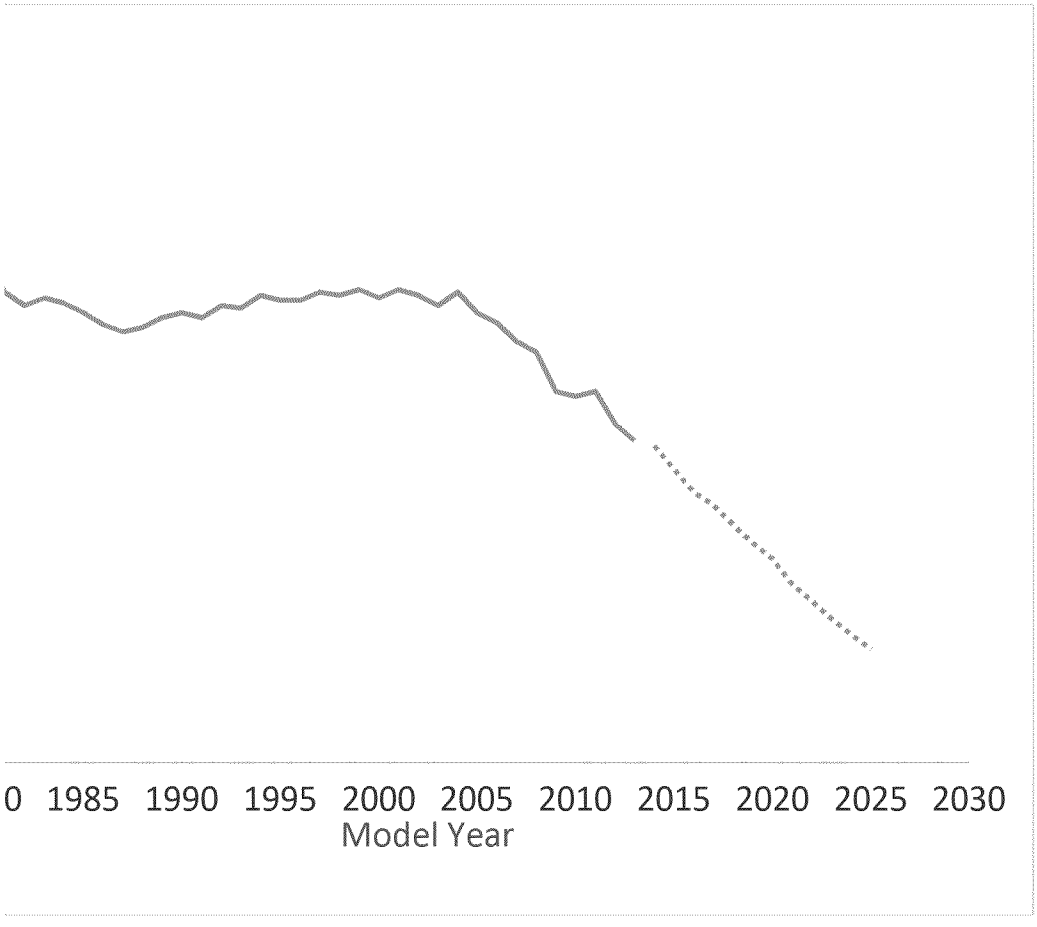
MODEL_YE	unadj5545	conv. Fact	g/mile
1975	15.3	8889	581
1976	16.7	8890	532
1977	17.7	8892	502
1978	18.6	8899	478
1979	18.7	8913	477
1980	22.5	8942	397
1981	24.1	8963	372
1982	24.7	8959	363
1983	24.6	8921	363
1984	24.6	8911	362
1985	25	8899	356
1986	25.7	8893	346
1987	25.9	8890	343
1988	25.9	8888	343
1989	25.4	8888	350
1990	25.2	8888	353
1991	25.4	8889	350
1992	24.9	8888	357
1993	25.1	8887	354
1994	24.6	8887	361
1995	24.7	8887	360
1996	24.8	8888	358
1997	24.5	8888	363
1998	24.5	8888	363
1999	24.1	8888	369
2000	24.3	8889	366
2001	24.2	8889	367
2002	24.1	8890	369
2003	24.3	8889	366
2004	24	8889	370
2005	24.8	8891	359
2006	25.2	8892	353

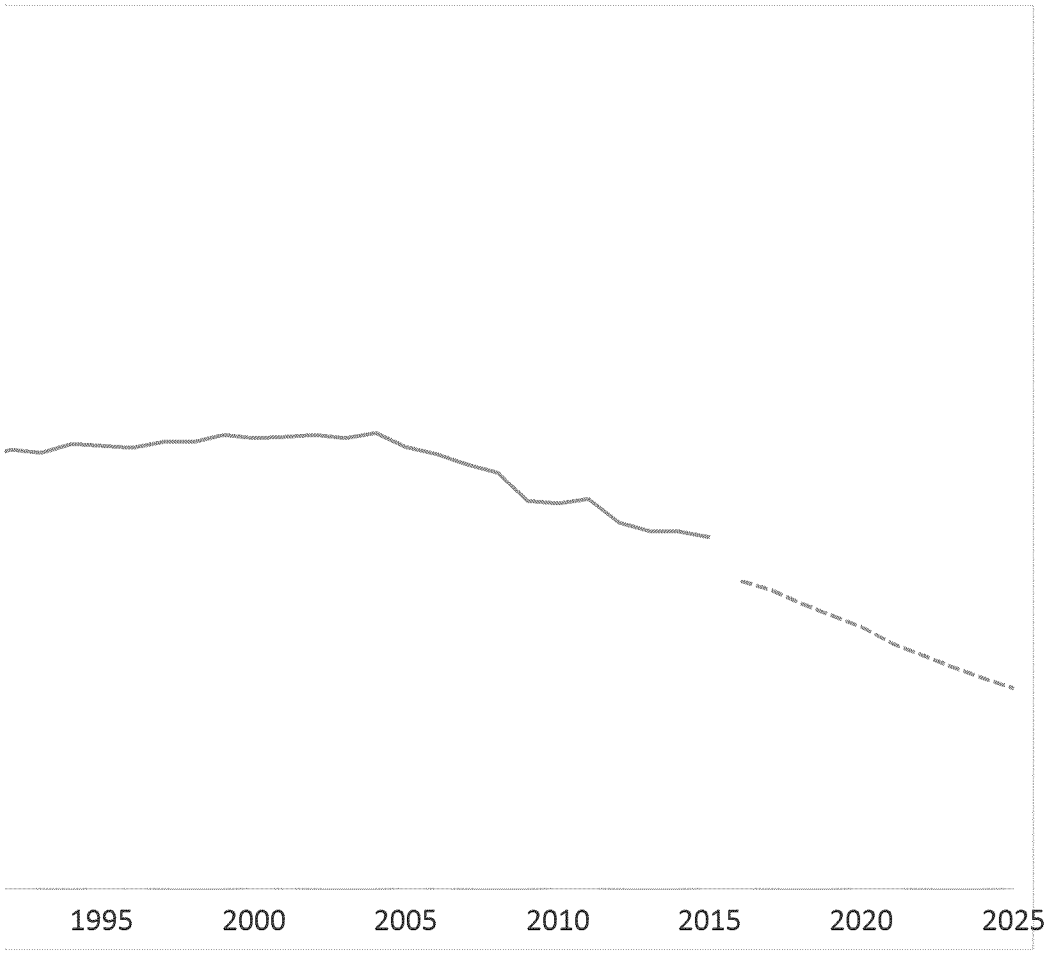


2007	25.8	8888	344
2008	26.3	8889	338
2009	28.2	8894	315
2010	28.4	8896	313
2011	28.1	8897	317
2012	29.9	8899	298
2013	30.6	8899	291
2014	30.7	8900	290
2015	31.2	8906	285
2016			250
2017			243
2018			232
2019			222
2020			213
2021			199
2022			190
2023			180
2024			171
2025			163

MODEL_YE	Car FE	% diesel	conversio	rg/mile	Truck FE			
1975	15.8	0.2%	8890	563	13.7		8887	650
1976	17.5	0.3%	8891	509	14.4		8887	617
1977	18.3	0.5%	8893	486	15.6		8887	568
1978	19.9	0.9%	8899	448	15.3	0.8%	8897	583
1979	20.2	2.1%	8914	440	14.7	1.8%	8910	605
1980	23.5	4.4%	8944	381	18.6	3.5%	8932	481
1981	25.1	5.9%	8963	357	20.1	5.6%	8959	446
1982	26.0	4.7%	8948	344	20.5	9.4%	9009	440
1983	25.9	2.1%	8914	344	20.8	4.8%	8949	430
1984	26.3	1.7%	8909	339	20.4	2.4%	8918	436
1985	26.9	0.9%	8899	330	20.5	1.1%	8901	434
1986	27.9	0.3%	8891	319	21.4	0.7%	8896	415
1987	28.0	0.2%	8890	317	21.6	0.3%	8891	411
1988	28.5	0.0%	8887	312	21.1	0.2%	8890	420
1989	28.1	0.0%	8887	317	20.9	0.2%	8890	426
1990	27.7	0.0%	8887	320	20.7	0.2%	8890	429
1991	27.8	0.1%	8888	320	21.2	0.1%	8888	419
1992	27.4	0.1%	8888	325	20.8	0.1%	8888	428
1993	27.6	0.0%	8887	322	21.0		8887	422
1994	27.7	0.0%	8887	320	20.7		8887	429
1995	28.1	0.1%	8888	316	20.5		8887	434
1996	28.0	0.1%	8888	317	20.8	0.1%	8888	428
1997	28.2	0.1%	8888	315	20.5	0.0%	8887	434
1998	28.1	0.2%	8890	316	20.8	0.0%	8887	428

1999	27.8	0.2%	8890	320	20.3	0.0%	8887	438
2000	27.7	0.2%	8890	321	20.7		8887	430
2001	27.9	0.2%	8890	318	20.3		8887	437
2002	28.3	0.4%	8892	315	20.3		8887	437
2003	28.7	0.3%	8891	310	20.7		8887	430
2004	28.5	0.3%	8891	312	20.5	0.0%	8887	434
2005	29.1	0.4%	8892	306	21.0	0.1%	8888	423
2006	28.9	0.6%	8895	308	21.4	0.1%	8888	416
2007	29.8	0.0%	8887	298	21.6	0.1%	8888	411
2008	30.1	0.1%	8888	296	22.2	0.2%	8890	401
2009	31.6	0.6%	8895	281	23.1	0.3%	8891	385
2010	32.6	0.9%	8899	273	23.4	0.4%	8892	379
2011	32.3	0.9%	8899	276	23.9	0.5%	8893	373
2012	34.3	1.0%	8900	259	24.1	0.7%	8896	369
2013	35.2	1.2%	8903	253	24.8	0.5%	8893	359
2014	35.5	1.5%	8906	251	25.2	1.6%	8908	353
2015								
2016				225				298
2017				212				295
2018				202				286
2019				191				277
2020				182				269
2021				172				249
2022				164				237
2023				157				225
2024				150				214
2025				143				203


0 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030
Model Year


1995
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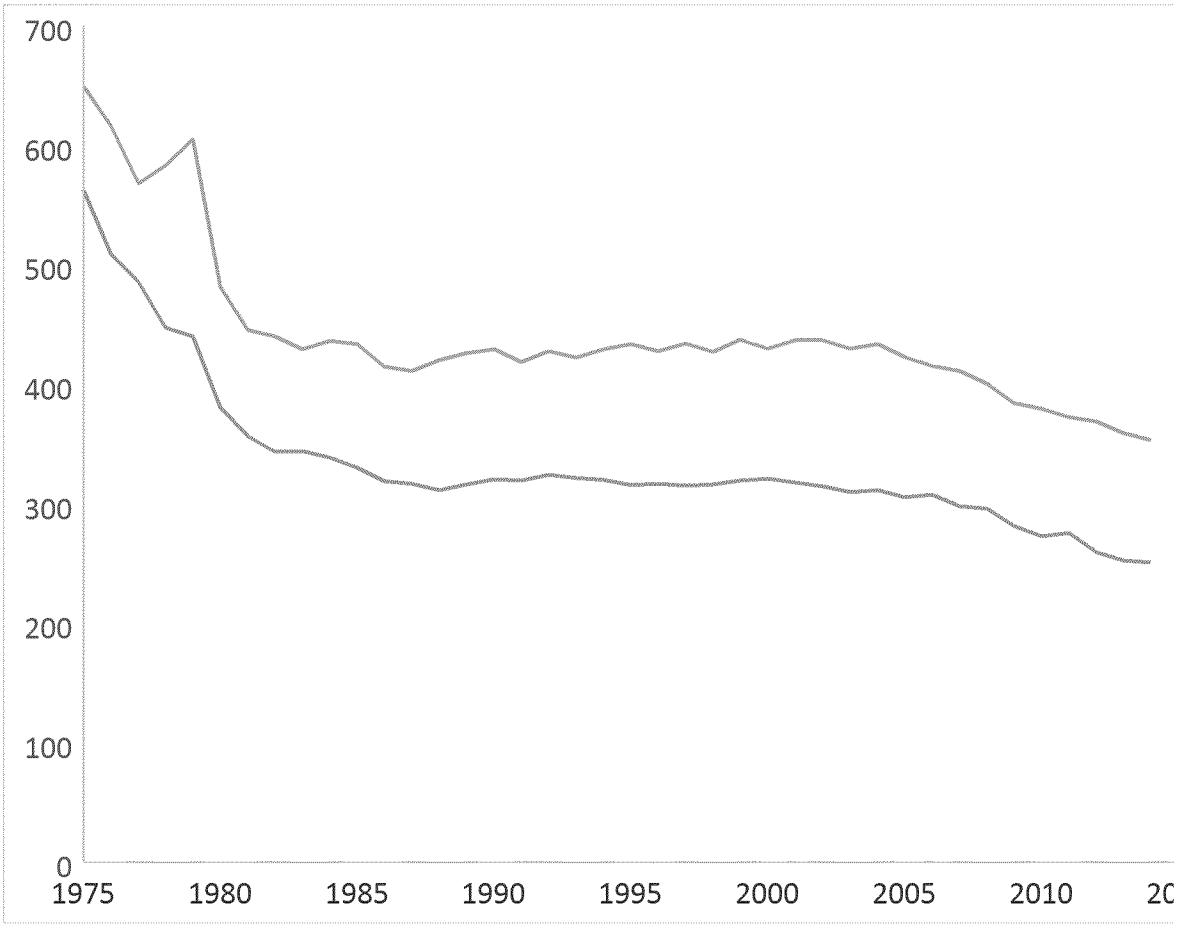
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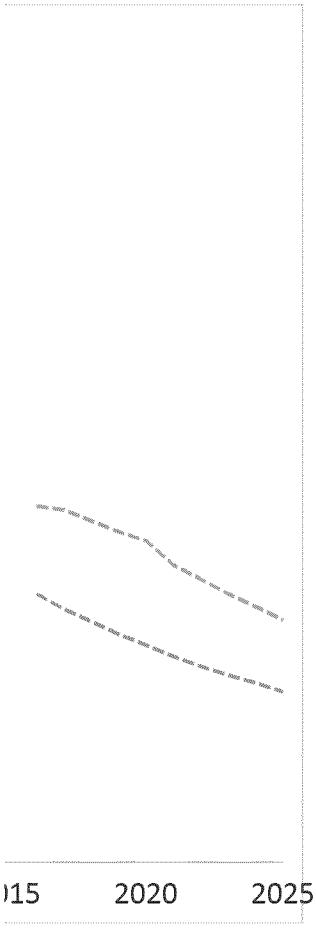
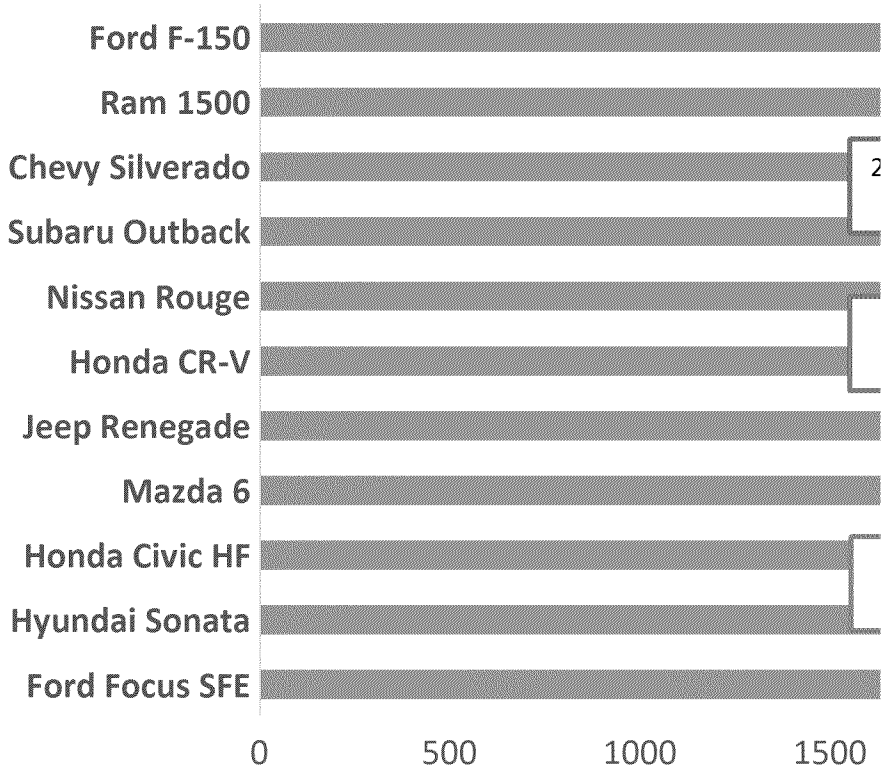
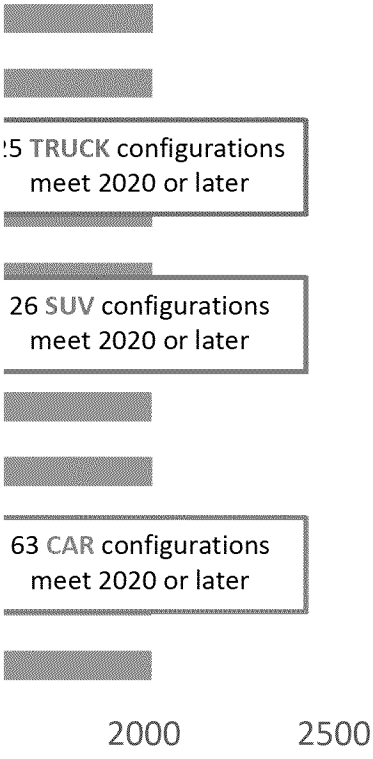

)15
2020
2025

Ford Focus SFE	2020
Hyundai Sonata	2020
Honda Civic HF	2020
Mazda 6	2021
Jeep Renegade	2020
Honda CR-V	2021
Nissan Rouge	2021
Subaru Outback	2021
Chevy Silverado	2021
Ram 1500	2021
Ford F-150	2024

		Trucks			SUVs			
		Ford F-150	Ram 1500	Chevy Silverado	Subaru Outback	Nissan Rouge	Honda CR-V	Jeep Renegade
Engine	Diesel		X					
	Turbocharging	X						X
	High Compression Atkinson							
	GDI	X		X			X	
	Cylinder Deactivation			X				
	Stop-start	X						
Trans	8+ Speed Transmissions		X					
	CVT				X	X	X	
Road Loads	Mass Reduction	X					X	
	Tires		X			X	X	
	Aero		X	X				



Cars			
Mazda 6	Honda Civic HF	Hyundai Sonata	Ford Focus SFE
		X	X
X			
X		X	X
	X		
X			
X	X	X	
		X	X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26 SUV configurations meet 2020 or later
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[redacted]
63 CAR configurations meet 2020 or later
[redacted]
2000
2500

Model Year	anufactur	Vehicle	Fuel Economy (combined unadjusted)	Tailpipe CO_2 (combined unadjusted)	Footprint (ft^2)	Powertrain Type	Engine Displacement
2015	Honda	CIVIC	41.1800	163	43.4	CNG	1.8
2015	BMW	328d	49.5715	205	46.9	Diesel	2.0
2015	BMW	X5 xDrive 35d	36.1134	282	52.0	Diesel	3.0
2015	Ram	1500 4X2 - Crew Cab, 6'4" Box	30.3427	336	70.9	Diesel	3.0
2015	Ram	1500 4X2 - Crew Cab, 6'4" Box	28.9989	351	70.9	Diesel	3.0
2015	Ram	1500 4X2 - Regular Cab, 8'0" Box	30.3427	336	66.6	Diesel	3.0
2015	Ram	1500 4X4 - Regular Cab, 8'0" Box	28.9989	351	66.6	Diesel	3.0
2015	Volkswagee	e-Golf		0	42.4	EV	
2015	Ford	Focus Electric FWD		0	43.5	EV	
2015	Tesla	S (60 kWh)		0	53.5	EV	
2015	Tesla	S (85 kWh)		0	53.5	EV	
2015	Tesla	S AWD		0	53.5	EV	
2015	Tesla	S AWD - 85D		0	53.5	EV	
2015	Tesla	S AWD - P85D		0	53.5	EV	
2015	Mercedes-	B-Class Electric Drive		0	45.0	EV	
2015	Nissan	Leaf		0	44.7	EV	
2015	Fiat	500e		0	34.7	EV	
2015	Kia	Soul Electric		0	43.3	EV	
2015	BYD	e6		0	44.6	EV	
2015	Chevrolet	Spark EV		0	35.8	EV	
2015	BMW	i3 BEV		0	43.5	EV	
2015	Smart	fortwo elec. drive (conv.)		0	26.8	EV	
2015	Smart	fortwo elec. drive (coupe)		0	26.8	EV	
2015	Hyundai	Tucson Fuel Cell		0	45.0	Fuel Cell	
2015	Honda	CIVIC HF	47.5222	187	43.4	Gasoline	1.8
2015	Ford	Focus SFE FWD	46.9885	189	43.5	Gasoline	1.0
2015	Mitsubishi	MIRAGE	54.8785	162	37.5	Gasoline	1.2
2015	Mitsubishi	MIRAGE	50.5419	176	37.5	Gasoline	1.2
2015	Hyundai	Sonata	42.4116	210	48.3	Gasoline	1.6
2015	Nissan	SENTRA FE+	46.0818	193	44.4	Gasoline	1.8
2015	Mercedes-	GLA 45 AMG 4MATIC	33.5142	265	49.0	Gasoline	2.0
2015	Mercedes-	GLA 250	38.2124	233	49.0	Gasoline	2.0
2015	Scion	iQ	52.2891	170	31.6	Gasoline	1.3
2015	Honda	CR-V 4WD	37.9986	234	44.4	Gasoline	2.4
2015	Subaru	OUTBACK	37.4474	237	45.7	Gasoline	2.5
2015	Jeep	Renegade 4x4	36.7030	242	42.7	Gasoline	1.4
2015	Nissan	ROGUE AWD	36.6364	243	46.4	Gasoline	2.5
2015	Mercedes-	GLA 250 4MATIC	35.9721	247	49.0	Gasoline	2.0
2015	Mercedes-	GLA 250 4MATIC	35.9721	247	49.0	Gasoline	2.0

2015	Ram	1500 4X2 - Regular Cab, 8'0" Box	25.6217	347	66.6	Gasoline	3.6
2015	Ram	1500 4X2 - Regular Cab, 8'0" Box	25.6217	347	66.6	Gasoline	3.6
2015	GMC	C15 SIERRA 2WD CAB CHASSIS	24.8429	358	72.5	Gasoline	4.3
2015	GMC	C15 SIERRA 2WD Crew Cab, Sho	25.8887	343	68.0	Gasoline	4.3
2015	GMC	C15 SIERRA 2WD Crew Cab, Sta	25.8887	343	72.5	Gasoline	4.3
2015	Chevrolet	C15 SILVERADO 2WD CAB CHA	24.8429	358	72.5	Gasoline	4.3
2015	Chevrolet	C15 SILVERADO 2WD Crew Cab	25.8615	344	68.0	Gasoline	4.3
2015	Chevrolet	C15 SILVERADO 2WD Crew Cab	25.8615	344	72.5	Gasoline	4.3
2015	Ford	F150 PICKUP 2WD	28.4590	312	76.8	Gasoline	2.7
2015	Ford	F150 PICKUP 2WD	28.4590	312	73.6	Gasoline	2.7
2015	Ford	F150 PICKUP 2WD	28.4590	312	68.1	Gasoline	2.7
2015	Ford	F150 PICKUP 2WD	28.4590	312	66.2	Gasoline	2.7
2015	Ford	F150 PICKUP 2WD	25.5817	347	76.8	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD	25.5817	347	73.6	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD	25.5817	347	68.1	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD	25.5817	347	66.2	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD FFV	26.5552	335	68.1	Gasoline	3.5
2015	Ford	F150 PICKUP 2WD FFV	26.5552	335	66.2	Gasoline	3.5
2015	Ford	F150 PICKUP 4WD	25.5058	348	68.1	Gasoline	2.7
2015	Ford	F150 PICKUP 4WD	25.5058	348	66.2	Gasoline	2.7
2015	Ford	F150 PICKUP 4WD FFV	24.9052	357	68.1	Gasoline	3.5
2015	Smart	fortwo (Convertible)	50.2830	177	26.8	Gasoline	1.0
2015	Smart	fortwo (COUPE)	50.2830	177	26.8	Gasoline	1.0
2015	Chevrolet	City Express Cargo Van	34.9238	254	49.6	Gasoline	2.0
2015	Ram	Promaster City	31.4586	282	54.9	Gasoline	2.4
2015	Nissan	NV200 Cargo Van	34.9238	254	47.9	Gasoline	2.0
2015	Nissan	NV200 NYC Taxi	34.1029	261	47.9	Gasoline	2.0
2015	Lexus	CT 200h	70.9573	125	42.7	HEV	1.8
2015	Volkswage	Jetta Hybrid	60.7663	146	44.0	HEV	1.4
2015	Honda	CIVIC HYBRID	63.7285	139	43.4	HEV	1.5
2015	Toyota	Prius c	70.7980	126	40.6	HEV	1.5
2015	Ford	C-MAX Hybrid FWD	54.9862	162	43.8	HEV	2.0
2015	Honda	Accord	69.8931	127	47.6	HEV	2.0
2015	Toyota	AVALON HYBRID	55.2009	161	47.7	HEV	2.5
2015	Lexus	ES 300h	55.2009	161	48.0	HEV	2.5
2015	Lexus	GS 450h	41.6347	213	48.5	HEV	3.5
2015	Infiniti	Q70 HYBRID	42.0623	211	49.1	HEV	3.5
2015	Toyota	CAMRY HYBRID LE	57.4438	155	47.2	HEV	2.5
2015	Toyota	CAMRY HYBRID XLE/SE	54.8426	162	47.2	HEV	2.5
2015	Kia	Optima HYBRID	51.5229	172	48.2	HEV	2.4
2015	Kia	Optima HYBRID EX	50.3669	176	48.2	HEV	2.4
2015	Toyota	Prius	70.9573	125	44.2	HEV	1.8
2015	Toyota	Prius v	58.6617	151	46.1	HEV	1.8
2015	Nissan	PATHFINDER Hybrid 2WD	36.6873	242	52.1	HEV	2.5
2015	Nissan	PATHFINDER Hybrid 4WD	35.4866	250	52.1	HEV	2.5

2015	Audi	Q5 Hybrid	34.0480	261	48.8	HEV	2.0
2015	Infiniti	QX60 HYBRID AWD	36.1667	246	48.7	HEV	2.5
2015	Toyota	HIGHLANDER HYBRID AWD	38.7150	230	48.9	HEV	3.5
2015	Toyota	HIGHLANDER HYBRID AWD LE	38.8724	229	48.9	HEV	3.5
2015	Lexus	NX 300h	44.8402	198	45.1	HEV	2.5
2015	Lexus	NX 300h AWD	43.5160	204	45.1	HEV	2.5
2015	Lexus	RX 450h	40.3557	220	48.0	HEV	3.5
2015	Lexus	RX 450h AWD	38.5680	230	48.0	HEV	3.5
2015	Subaru	XV CROSSTREK	38.5928	230	43.2	HEV	2.0
2015	Subaru	XV CROSSTREK HYBRID	42.4665	209	43.2	HEV	2.0
2015	Honda	CR-Z	51.1079	174	39.5	HEV	1.5
2015	Chevrolet	Volt		51	45.1	PHEV	1.4
2015	Porsche	Panamera S E-Hybrid		161	52.2	PHEV	3.0
2015	Ford	FUSION Energi Plug-in Hybrid FW	53.3195	87	48.7	PHEV	2.0
2015	Ford	C-MAX Energi Plug-In Hybrid FWD		87	43.8	PHEV	2.0
2015	Toyota	PRIUS Plug-in Hybrid	69.7528	110	44.2	PHEV	1.8
2015	Porsche	Cayenne S e-Hybrid		183	51.8	PHEV	3.0
2015	Cadillac	ELR		51	46.2	PHEV	1.4
2015	BMW	i8		125	48.5	PHEV	1.5
2015	BMW	i3 REX		4	43.5	PHEV	
2015	Porsche	918 Spyder		181	48.2	PHEV	4.6

Transmision	Vehicle Class	Car/Truck	Superced ed		Sales	
Auto(A5)	Compact Cars	C	0		2191	
Auto(S8)	Compact Cars	C	0		5200	
Auto(S8)	Sport Utility Vehicles	T	0		7000	
Auto(A8)	Standard Pick-up Trucks	T	0		3227	
Auto(A8)	Standard Pick-up Trucks	T	0		12793	
Auto(A8)	Standard Pick-up Trucks	T	0		3227	
Auto(A8)	Standard Pick-up Trucks	T	0		12793	
Auto(A1)	Compact Cars	C	0		3565	
Auto(A1)	Compact Cars	C	0		2343	
Auto(A1)	Large Cars	C	0		25000	
Auto(A1)	Large Cars	C	0		10000	
Auto(A1)	Large Cars	C	0		15000	
Auto(A1)	Large Cars	C	0		10000	
Auto(A1)	Large Cars	C	0		10000	
Auto(A1)	Midsize Cars	C	0		5727	
Auto(A1)	Midsize Cars	C	0		41004	
Auto(A1)	Minicompact Cars	C	0		5340	
Auto(A1)	Small Station Wagons	C	0		1200	
Auto(A1)	Subcompact Cars	C	0			
Auto(A1)	Subcompact Cars	C	0		2700	
Auto(A1)	Subcompact Cars	C	0		2000	
Auto(A1)	Two Seaters	C	0		414	
Auto(A1)	Two Seaters	C	0		2022	
Auto(A1)	Sport Utility Vehicles	C	0		105	
Auto(AV)	Compact Cars	C	0		11377	
Manual(M6	Compact Cars	C	0		1555	
Auto(AV)	Compact Cars	C	0		8688	
Manual(M5	Compact Cars	C	0		2214	
Auto(AM7)	Large Cars	C	0		13050	
Auto(AV)	Midsize Cars	C	0		8603	
Auto(AM7)	Midsize Station Wagons	T	0		863	
Auto(AM7)	Midsize Station Wagons	T	0		5600	
Auto(AV)	Minicompact Cars	C	0		1550	
Auto(AV)	Sport Utility Vehicles	T	0		180600	
Auto(AV-S	Sport Utility Vehicles	T	0		98400	
Manual(M6	Sport Utility Vehicles	T	0		3003	
Auto(AV)	Sport Utility Vehicles	T	0		91736	
Auto(AM7)	Sport Utility Vehicles	T	0		4587	
Auto(AM7)	Sport Utility Vehicles	T	0		4587	

Auto(A8)	Standard Pick-up Trucks	T	0	3960
Auto(A8)	Standard Pick-up Trucks	T	0	10192
Auto(A6)	Standard Pick-up Trucks	T	0	38
Auto(A6)	Standard Pick-up Trucks	T	0	2004
Auto(A6)	Standard Pick-up Trucks	T	0	2004
Auto(A6)	Standard Pick-up Trucks	T	0	25
Auto(A6)	Standard Pick-up Trucks	T	0	6735
Auto(A6)	Standard Pick-up Trucks	T	0	6735
Auto(S6)	Standard Pick-up Trucks	T	0	7388
Auto(S6)	Standard Pick-up Trucks	T	0	7388
Auto(S6)	Standard Pick-up Trucks	T	0	7388
Auto(S6)	Standard Pick-up Trucks	T	0	7388
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Auto(S6)	Standard Pick-up Trucks	T	0	6566
Auto(S6)	Standard Pick-up Trucks	T	0	6566
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Auto(S6)	Standard Pick-up Trucks	T	0	23443
Auto(A6)	Standard Pick-up Trucks	T	0	4074
Auto(AM5)	Two Seaters	C	0	176
Auto(AM5)	Two Seaters	C	0	1892
Auto(AV)	Vans	T	0	21600
Auto(A9)	Vans	T	0	13180
Auto(AV)	Vans	T	0	19249
Auto(AV)	Vans	T	0	2400
Auto(AV)	Compact Cars	C	0	17100
Auto(AM-S	Compact Cars	C	0	2360
Auto(AV)	Compact Cars	C	0	7214
Auto(AV)	Compact Cars	C	0	46100
Auto(AV)	Large Cars	C	0	15817
Auto(AV)	Midsize Cars	C	0	14693
Auto(AV-S	Midsize Cars	C	0	14292
Auto(AV-S	Midsize Cars	C	0	15450
Auto(AV-S	Midsize Cars	C	0	97
Auto(S7)	Midsize Cars	C	0	329
Auto(AV)	Midsize Cars	C	0	10744
Auto(AV)	Midsize Cars	C	0	26303
Auto(AM6)	Midsize Cars	C	0	10440
Auto(AM6)	Midsize Cars	C	0	5630
Auto(AV)	Midsize Cars	C	0	100900
Auto(AV)	Midsize Station Wagons	C	0	44300
Auto(AV)	Sport Utility Vehicles	T	0	5202
Auto(AV)	Sport Utility Vehicles	T	0	6359

Auto(S8)	Sport Utility Vehicles	T	0	502
Auto(AV-S	Sport Utility Vehicles	T	0	4735
Auto(AV-S	Sport Utility Vehicles	T	0	3610
Auto(AV-S	Sport Utility Vehicles	T	0	15
Auto(AV-S	Sport Utility Vehicles	C	0	776
Auto(AV-S	Sport Utility Vehicles	T	0	1164
Auto(AV-S	Sport Utility Vehicles	T	0	4677
Auto(AV-S	Sport Utility Vehicles	T	0	12486
Auto(AV-S	Sport Utility Vehicles	T	0	41076
Auto(AV-S	Sport Utility Vehicles	T	0	7764
Auto(AV-S	Two Seaters	C	0	1005
Auto(AV)	Compact Cars	C	0	17803
Auto(AM-S	Large Cars	C	0	1000
Auto(AV)	Midsize Cars	C	0	7354
Auto(AV)	Midsize Cars	C	0	8563
Auto(AV)	Midsize Cars	C	0	5500
Auto(AM8)	Sport Utility Vehicles	T	0	1000
Auto(AV)	Subcompact Cars	C	0	12
Auto(A6)	Subcompact Cars	C	0	580
Auto(A1)	Subcompact Cars	C	0	3000
Auto(AM-S	Two Seaters	C	0	400

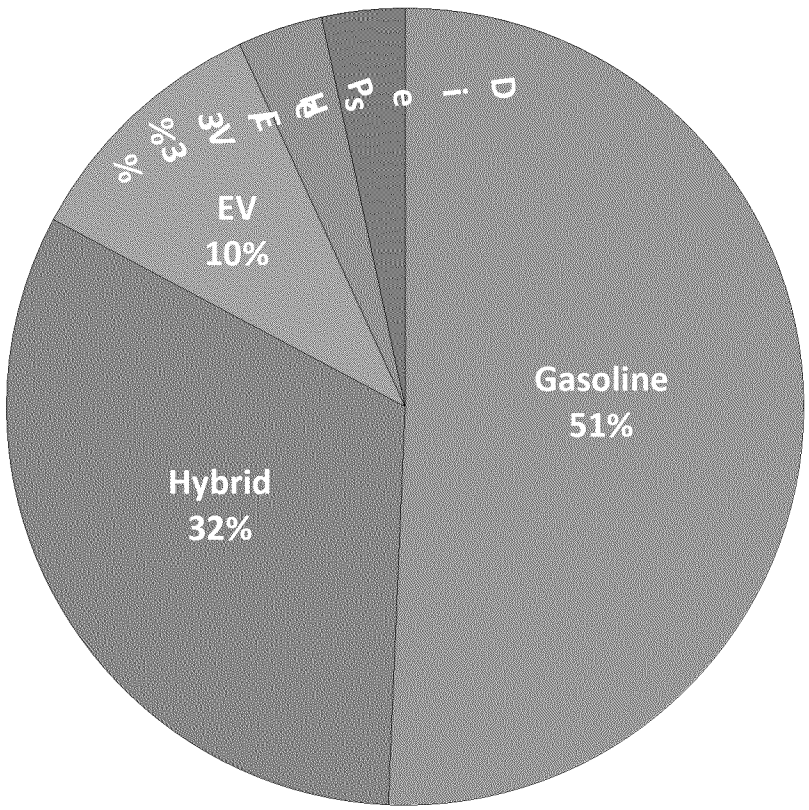
Full Name
Honda CIVIC
BMW 328d
BMW X5 xDrive 35d
Ram 1500 4X2 - Crew Cab, 6'4" Box
Ram 1500 4X2 - Crew Cab, 6'4" Box
Ram 1500 4X2 - Regular Cab, 8'0" Box
Ram 1500 4X4 - Regular Cab, 8'0" Box
Volkswagen e-Golf
Ford Focus Electric FWD
Tesla S (60 kWh)
Tesla S (85 kWh)
Tesla S AWD
Tesla S AWD - 85D
Tesla S AWD - P85D
Mercedes-Benz B-Class Electric Drive
Nissan Leaf
Fiat 500e
Kia Soul Electric
BYD e6
Chevrolet Spark EV
BMW i3 BEV
Smart fortwo elec. drive (conv.)
Smart fortwo elec. drive (coupe)
Hyundai Tucson Fuel Cell
Honda CIVIC HF
Ford Focus SFE FWD
Mitsubishi MIRAGE
Mitsubishi MIRAGE
Hyundai Sonata
Nissan SENTRA FE+
Mercedes-Benz GLA 45 AMG 4MATIC
Mercedes-Benz GLA 250
Scion iQ
Honda CR-V 4WD
Subaru OUTBACK
Jeep Renegade 4x4
Nissan ROGUE AWD
Mercedes-Benz GLA 250 4MATIC
Mercedes-Benz GLA 250 4MATIC

	Model Count	Sales
Compact Cars	13	127710
Large Cars	8	99867
Midsize Cars	16	275629
Midsize Station Wagons	3	50763
Minicompact Cars	2	6890
Small Station Wagons	1	1200
Sport Utility Vehicles	21	479384
Standard Pick-up Trucks	25	201884.13333
Subcompact Cars	6	8292
Two Seaters	6	5909
Vans	4	56429
Gasoline	42	664755
HEV	29	421140
EV	16	136315
PHEV	10	45212
Diesel	6	44239
Fuel Cell	1	105
CNG	1	2191
		1,313,957

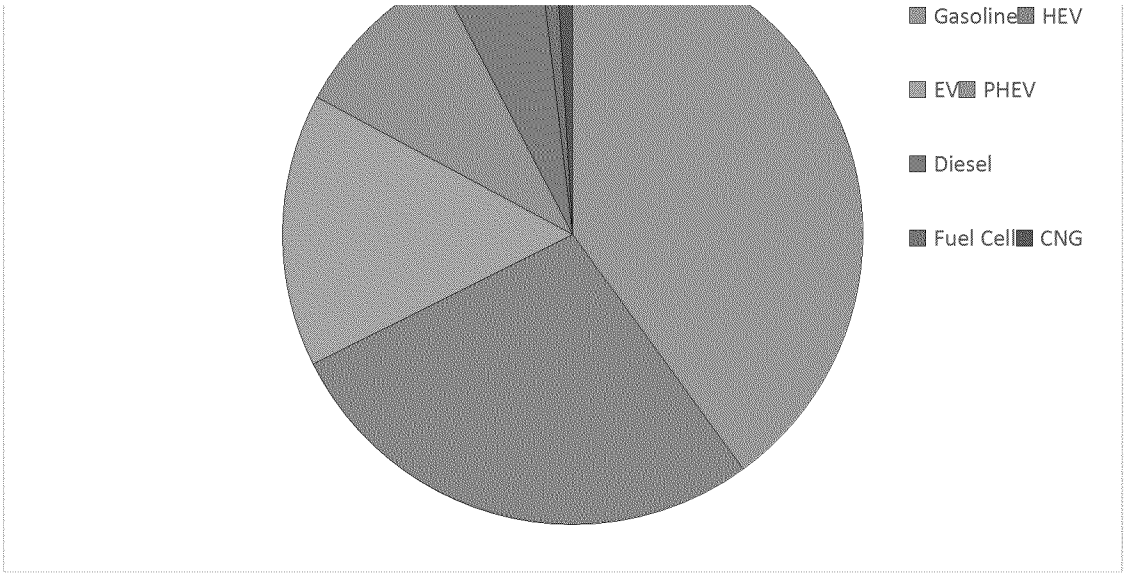
Ram 1500 4X2 - Regular Cab, 8'0" Box
Ram 1500 4X2 - Regular Cab, 8'0" Box
GMC C15 SIERRA 2WD CAB CHASSIS
GMC C15 SIERRA 2WD Crew Cab, Short Box
GMC C15 SIERRA 2WD Crew Cab, Standard Box
Chevrolet C15 SILVERADO 2WD CAB CHASSIS
Chevrolet C15 SILVERADO 2WD Crew Cab, Short Box
Chevrolet C15 SILVERADO 2WD Crew Cab, Standard Box
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD
Ford F150 PICKUP 2WD FFV
Ford F150 PICKUP 2WD FFV
Ford F150 PICKUP 4WD
Ford F150 PICKUP 4WD
Ford F150 PICKUP 4WD FFV
Smart fortwo (Convertible)
Smart fortwo (COUPE)
Chevrolet City Express Cargo Van
Ram Promaster City
Nissan NV200 Cargo Van
Nissan NV200 NYC Taxi
Lexus CT 200h
Volkswagen Jetta Hybrid
Honda CIVIC HYBRID
Toyota Prius c
Ford C-MAX Hybrid FWD
Honda Accord
Toyota AVALON HYBRID
Lexus ES 300h
Lexus GS 450h
Infiniti Q70 HYBRID
Toyota CAMRY HYBRID LE
Toyota CAMRY HYBRID XLE/SE
Kia Optima HYBRID
Kia Optima HYBRID EX
Toyota Prius
Toyota Prius v
Nissan PATHFINDER Hybrid 2WD
Nissan PATHFINDER Hybrid 4WD

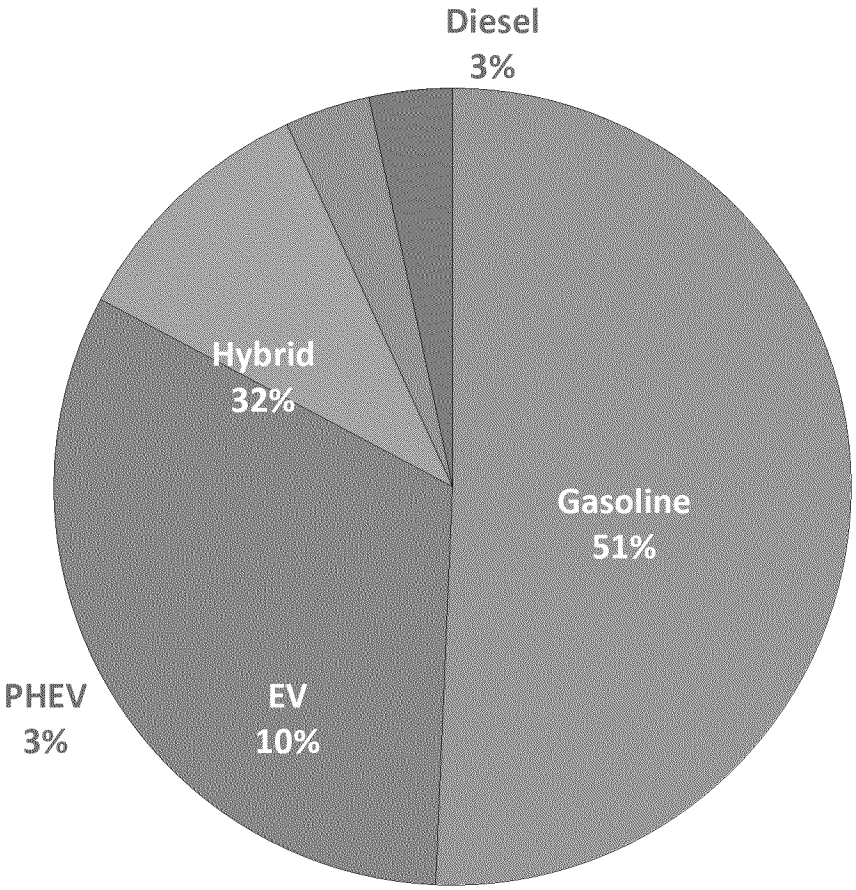
Audi Q5 Hybrid
Infiniti QX60 HYBRID AWD
Toyota HIGHLANDER HYBRID AWD
Toyota HIGHLANDER HYBRID AWD LE Plus
Lexus NX 300h
Lexus NX 300h AWD
Lexus RX 450h
Lexus RX 450h AWD
Subaru XV CROSSTREK
Subaru XV CROSSTREK HYBRID
Honda CR-Z
Chevrolet Volt
Porsche Panamera S E-Hybrid
Ford FUSION Energi Plug-in Hybrid FWD
Ford C-MAX Energi Plug-In Hybrid FWD
Toyota PRIUS Plug-in Hybrid
Porsche Cayenne S e-Hybrid
Cadillac ELR
BMW i8
BMW i3 REX
Porsche 918 Spyder

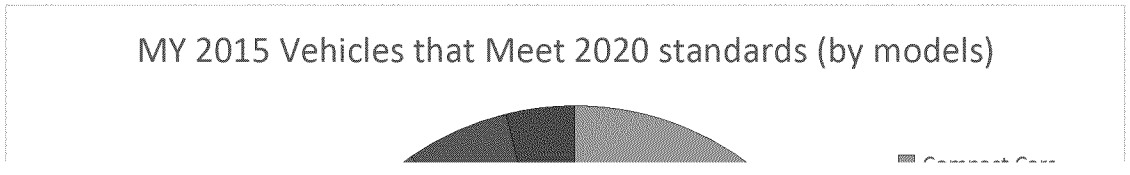
51%
32%
10%
3%
3%
0%
0%

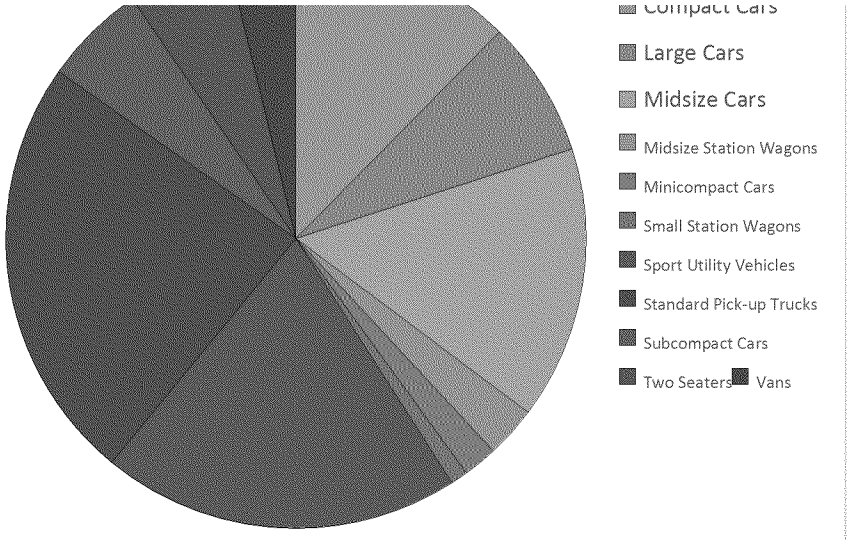


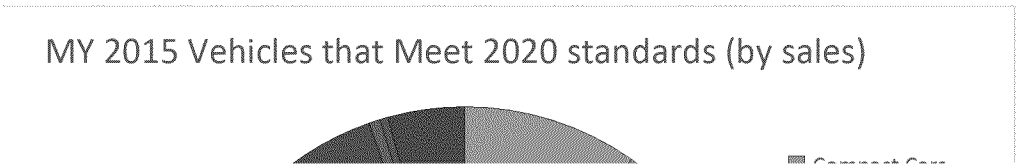
MY 2015 Vehicles that Meet 2020 standards (by models)

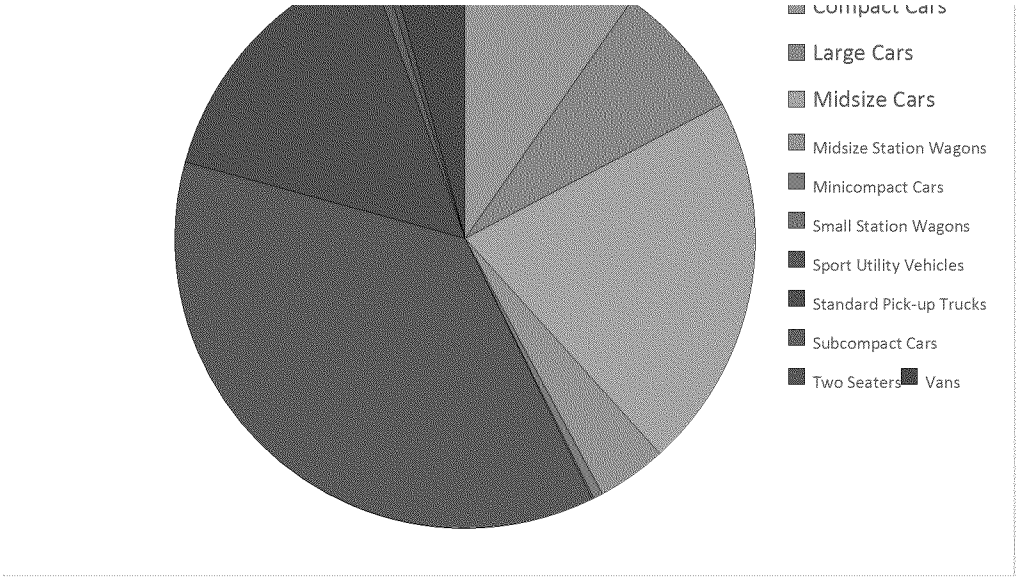

Gasoline
HEV
EV
PHEV
Diesel
Fuel Cell
CNG


Diesel
3%
Hybrid
32%
Gasoline
51%
PHEV
3%
EV
10%


MY 2015 Vehicles that Meet 2020 standards (by models)


Compact Cars
Large Cars
Midsize Cars
Midsize Station Wagons
Minicompact Cars
Small Station Wagons
Sport Utility Vehicles
Standard Pick-up Trucks
Subcompact Cars
Two Seaters
Vans


MY 2015 Vehicles that Meet 2020 standards (by sales)


Compact Cars
Large Cars
Midsize Cars
Midsize Station Wagons
Minicompact Cars
Small Station Wagons
Sport Utility Vehicles
Standard Pick-up Trucks
Subcompact Cars
Two Seaters
Vans

Model Year	anufactur	Vehicle	Fuel Economy (combined unadjusted)	Tailpipe CO_2 (combined unadjusted)	Footprint (ft^2)	Powertrain Type	Engine Displacement
2016	Ram	1500					
2015	BMW	328d	49.5715	205	46.9	Diesel	2.0
2015	Fiat	500e		0	34.7	EV	
2015	Porsche	918 Spyder		181	48.2	PHEV	4.6
2015	Honda	Accord	69.8931	127	47.6	HEV	2.0
2015	Toyota	AVALON HYBRID	55.2009	161	47.7	HEV	2.5
2015	Mercedes-	B-Class Electric Drive		0	45.0	EV	
2015	GMC	Sierra					
2015	Chevrolet	Silverado					
2015	Toyota	Camry					
2015	Porsche	Cayenne S e-Hybrid		183	51.8	PHEV	3.0
2015	Chevrolet	City Express Cargo Van	34.9238	254	49.6	Gasoline	2.0
2015	Honda	CIVIC	41.1800	163	43.4	CNG	1.8
2015	Honda	CIVIC HF	47.5222	187	43.4	Gasoline	1.8
2015	Honda	CIVIC HYBRID	63.7285	139	43.4	HEV	1.5
2015	Ford	C-MAX Energi Plug-In Hybrid FWD		87	43.8	PHEV	2.0
2015	Ford	C-MAX Hybrid FWD	54.9862	162	43.8	HEV	2.0
2015	Honda	CR-V 4WD	37.9986	234	44.4	Gasoline	2.4
2015	Honda	CR-Z	51.1079	174	39.5	HEV	1.5
2015	Lexus	CT 200h	70.9573	125	42.7	HEV	1.8
2015	BYD	e6		0	44.6	EV	
2015	Volkswagee	e-Golf		0	42.4	EV	
2015	Cadillac	ELR		51	46.2	PHEV	1.4
2015	Lexus	ES 300h	55.2009	161	48.0	HEV	2.5
2015	Ford						
2015	Ford	Focus Electric FWD		0	43.5	EV	
2015	Ford	Focus SFE FWD	46.9885	189	43.5	Gasoline	1.0
2015	Smart	fortwo (Convertible)	50.2830	177	26.8	Gasoline	1.0
2015	Smart	fortwo (COUPE)	50.2830	177	26.8	Gasoline	1.0
2015	Smart	fortwo elec. drive (conv.)		0	26.8	EV	
2015	Smart	fortwo elec. drive (coupe)		0	26.8	EV	
2015	Ford	FUSION Energi Plug-in Hybrid FW	53.3195	87	48.7	PHEV	2.0
2015	Mercedes-	GLA 250					
2015	Mercedes-	GLA 45 AMG 4MATIC	33.5142	265	49.0	Gasoline	2.0
2015	Lexus	GS 450h	41.6347	213	48.5	HEV	3.5
2015	Toyota	HIGHLANDER HYBRID AWD	38.7150	230	48.9	HEV	3.5
2015	Toyota	HIGHLANDER HYBRID AWD LE	38.8724	229	48.9	HEV	3.5
2015	BMW	i3 BEV		0	43.5	EV	
2015	BMW	i3 REX		4	43.5	PHEV	

2015	BMW	i8		125	48.5	PHEV	1.5
2015	Scion	iQ	52.2891	170	31.6	Gasoline	1.3
2015	Volkswage	Jetta Hybrid	60.7663	146	44.0	HEV	1.4
2015	Nissan	Leaf		0	44.7	EV	
2015	Mitsubishi	MIRAGE	54.8785	162	37.5	Gasoline	1.2
2015	Mitsubishi	MIRAGE	50.5419	176	37.5	Gasoline	1.2
2015	Nissan	NV200 Cargo Van	34.9238	254	47.9	Gasoline	2.0
2015	Nissan	NV200 NYC Taxi	34.1029	261	47.9	Gasoline	2.0
2015	Lexus	NX 300h	44.8402	198	45.1	HEV	2.5
2015	Lexus	NX 300h AWD	43.5160	204	45.1	HEV	2.5
2015	Kia	Optima HYBRID	51.5229	172	48.2	HEV	2.4
2015	Kia	Optima HYBRID EX	50.3669	176	48.2	HEV	2.4
2015	Subaru	OUTBACK	37.4474	237	45.7	Gasoline	2.5
2015	Porsche	Panamera S E-Hybrid		161	52.2	PHEV	3.0
2015	Nissan	Pathfinder					
2015	Toyota	Prius	70.9573	125	44.2	HEV	1.8
2015	Toyota	Prius c	70.7980	126	40.6	HEV	1.5
2015	Toyota	PRIUS Plug-in Hybrid	69.7528	110	44.2	PHEV	1.8
2015	Toyota	Prius v	58.6617	151	46.1	HEV	1.8
2015	Ram	Promaster City	31.4586	282	54.9	Gasoline	2.4
2015	Audi	Q5 Hybrid	34.0480	261	48.8	HEV	2.0
2015	Infiniti	Q70 HYBRID	42.0623	211	49.1	HEV	3.5
2015	Infiniti	QX60 HYBRID AWD	36.1667	246	48.7	HEV	2.5
2015	Jeep	Renegade 4x4	36.7030	242	42.7	Gasoline	1.4
2015	Nissan	ROGUE AWD	36.6364	243	46.4	Gasoline	2.5
2015	Lexus	RX 450h	40.3557	220	48.0	HEV	3.5
2015	Lexus	RX 450h AWD	38.5680	230	48.0	HEV	3.5
2015	Tesla	S					
2015	Nissan	SENTRA FE+	46.0818	193	44.4	Gasoline	1.8
2015	Hyundai	Sonata	42.4116	210	48.3	Gasoline	1.6
2015	Kia	Soul Electric		0	43.3	EV	
2015	Chevrolet	Spark EV		0	35.8	EV	
2015	Hyundai	Tucson Fuel Cell		0	45.0	Fuel Cell	
2015	Chevrolet	Volt		51	45.1	PHEV	1.4
2015	BMW	X5 xDrive 35d	36.1134	282	52.0	Diesel	3.0
2015	Subaru	XV CROSSTREK	38.5928	230	43.2	HEV	2.0
2015	Subaru	XV CROSSTREK HYBRID	42.4665	209	43.2	HEV	2.0
2015	Nissan	PATHFINDER Hybrid 2WD	36.6873	242	52.1	HEV	2.5
2015	Nissan	PATHFINDER Hybrid 4WD	35.4866	250	52.1	HEV	2.5
2015	Mercedes-	GLA 250	38.2124	233	49.0	Gasoline	2.0
2015	Mercedes-	GLA 250 4MATIC	35.9721	247	49.0	Gasoline	2.0
2015	Mercedes-	GLA 250 4MATIC	35.9721	247	49.0	Gasoline	2.0

2015 Toyota	CAMRY HYBRID LE	57.4438	155	47.2	HEV	2.5
2015 Toyota	CAMRY HYBRID XLE/SE	54.8426	162	47.2	HEV	2.5
2015 Chevrolet	C15 SILVERADO 2WD CAB CHA	24.8429	358	72.5	Gasoline	4.3
2015 Chevrolet	C15 SILVERADO 2WD Crew Cab	25.8615	344	68.0	Gasoline	4.3
2015 Chevrolet	C15 SILVERADO 2WD Crew Cab	25.8615	344	72.5	Gasoline	4.3
2015 GMC	C15 SIERRA 2WD CAB CHASSIS	24.8429	358	72.5	Gasoline	4.3
2015 GMC	C15 SIERRA 2WD Crew Cab, Sho	25.8887	343	68.0	Gasoline	4.3
2015 GMC	C15 SIERRA 2WD Crew Cab, Sta	25.8887	343	72.5	Gasoline	4.3
2015 Ram	1500 4X2 - Crew Cab, 6'4" Box	30.3427	336	70.9	Diesel	3.0
2015 Ram	1500 4X2 - Crew Cab, 6'4" Box	28.9989	351	70.9	Diesel	3.0
2015 Ram	1500 4X2 - Regular Cab, 8'0" Box	30.3427	336	66.6	Diesel	3.0
2015 Ram	1500 4X2 - Regular Cab, 8'0" Box	25.6217	347	66.6	Gasoline	3.6
2015 Ram	1500 4X2 - Regular Cab, 8'0" Box	25.6217	347	66.6	Gasoline	3.6
2015 Ram	1500 4X4 - Regular Cab, 8'0" Box	28.9989	351	66.6	Diesel	3.0
2015 Ford	F150 PICKUP 2WD	28.4590	312	76.8	Gasoline	2.7
2015 Ford	F150 PICKUP 2WD	28.4590	312	73.6	Gasoline	2.7
2015 Ford	F150 PICKUP 2WD	28.4590	312	68.1	Gasoline	2.7
2015 Ford	F150 PICKUP 2WD	28.4590	312	66.2	Gasoline	2.7
2015 Ford	F150 PICKUP 2WD	25.5817	347	76.8	Gasoline	3.5
2015 Ford	F150 PICKUP 2WD	25.5817	347	73.6	Gasoline	3.5
2015 Ford	F150 PICKUP 2WD	25.5817	347	68.1	Gasoline	3.5
2015 Ford	F150 PICKUP 2WD	25.5817	347	66.2	Gasoline	3.5
2015 Ford	F150 PICKUP 2WD FFV	26.5552	335	68.1	Gasoline	3.5
2015 Ford	F150 PICKUP 2WD FFV	26.5552	335	66.2	Gasoline	3.5
2015 Ford	F150 PICKUP 4WD	25.5058	348	68.1	Gasoline	2.7
2015 Ford	F150 PICKUP 4WD	25.5058	348	66.2	Gasoline	2.7
2015 Ford	F150 PICKUP 4WD FFV	24.9052	357	68.1	Gasoline	3.5
2015 Tesla	S (60 kWh)		0	53.5	EV	
2015 Tesla	S (85 kWh)		0	53.5	EV	
2015 Tesla	S AWD		0	53.5	EV	
2015 Tesla	S AWD - 85D		0	53.5	EV	
2015 Tesla	S AWD - P85D		0	53.5	EV	

Transmision	Vehicle Class	Car/Truck		Sales		Full Name
	Standard Pick-up Trucks	T		46191		
Auto(S8)	Compact Cars	C		5200		BMW 328d
Auto(A1)	Minicompact Cars	C		5340		Fiat 500e
Auto(AM-S	Two Seaters	C		400		Porsche 918 Spyder
Auto(AV)	Midsize Cars	C		14693		Honda Accord
Auto(AV-S	Midsize Cars	C		14292		Toyota AVALON HYBRID
Auto(A1)	Midsize Cars	C		5727		Mercedes-Benz B-Class Electric
	Standard Pick-up Trucks	T		4045		GMC Sierra
	Standard Pick-up Trucks			13496		
	Midsize Cars	C		37047		
Auto(AM8)	Sport Utility Vehicles	T		1000		Porsche Cayenne S e-Hybrid
Auto(AV)	Vans	T		21600		Chevrolet City Express Cargo V
Auto(A5)	Compact Cars	C		2191		Honda CIVIC
Auto(AV)	Compact Cars	C		11377		Honda CIVIC HF
Auto(AV)	Compact Cars	C		7214		Honda CIVIC HYBRID
Auto(AV)	Midsize Cars	C		8563		Ford C-MAX Energi Plug-In Hyb
Auto(AV)	Large Cars	C		15817		Ford C-MAX Hybrid FWD
Auto(AV)	Sport Utility Vehicles	T		180600		Honda CR-V 4WD
Auto(AV-S	Two Seaters	C		1005		Honda CR-Z
Auto(AV)	Compact Cars	C		17100		Lexus CT 200h
Auto(A1)	Subcompact Cars	C				BYD e6
Auto(A1)	Compact Cars	C		3565		Volkswagen e-Golf
Auto(AV)	Subcompact Cars	C		12		Cadillac ELR
Auto(AV-S	Midsize Cars	C		15450		Lexus ES 300h
	Standard Pick-up Trucks	T		138153		
Auto(A1)	Compact Cars	C		2343		Ford Focus Electric FWD
Manual(M6	Compact Cars	C		1555		Ford Focus SFE FWD
Auto(AM5)	Two Seaters	C		176		Smart fortwo (Convertible)
Auto(AM5)	Two Seaters	C		1892		Smart fortwo (COUPE)
Auto(A1)	Two Seaters	C		414		Smart fortwo elec. drive (conv.
Auto(A1)	Two Seaters	C		2022		Smart fortwo elec. drive (coup
Auto(AV)	Midsize Cars	C		7354		Ford FUSION Energi Plug-in Hy
	Sport Utility Vehicles			14774		
Auto(AM7)	Midsize Station Wagons	T		863		Mercedes-Benz GLA 45 AMG 4
Auto(AV-S	Midsize Cars	C		97		Lexus GS 450h
Auto(AV-S	Sport Utility Vehicles	T		3610		Toyota HIGHLANDER HYBRID A
Auto(AV-S	Sport Utility Vehicles	T		15		Toyota HIGHLANDER HYBRID A
Auto(A1)	Subcompact Cars	C		2000		BMW i3 BEV
Auto(A1)	Subcompact Cars	C		3000		BMW i3 REX

Auto(A6)	Subcompact Cars	C	580	BMW i8
Auto(AV)	Minicompact Cars	C	1550	Scion iQ
Auto(AM-S	Compact Cars	C	2360	Volkswagen Jetta Hybrid
Auto(A1)	Midsize Cars	C	41004	Nissan Leaf
Auto(AV)	Compact Cars	C	8688	Mitsubishi MIRAGE
Manual(M5	Compact Cars	C	2214	Mitsubishi MIRAGE
Auto(AV)	Vans	T	19249	Nissan NV200 Cargo Van
Auto(AV)	Vans	T	2400	Nissan NV200 NYC Taxi
Auto(AV-S	Sport Utility Vehicles	C	776	Lexus NX 300h
Auto(AV-S	Sport Utility Vehicles	T	1164	Lexus NX 300h AWD
Auto(AM6)	Midsize Cars	C	10440	Kia Optima HYBRID
Auto(AM6)	Midsize Cars	C	5630	Kia Optima HYBRID EX
Auto(AV-S	Sport Utility Vehicles	T	98400	Subaru OUTBACK
Auto(AM-S	Large Cars	C	1000	Porsche Panamera S E-Hybrid
Auto(AV)	Sport Utility Vehicles	T	11561	Nissan Pathfinder
Auto(AV)	Midsize Cars	C	100900	Toyota Prius
Auto(AV)	Compact Cars	C	46100	Toyota Prius c
Auto(AV)	Midsize Cars	C	5500	Toyota PRIUS Plug-in Hybrid
Auto(AV)	Midsize Station Wagons	C	44300	Toyota Prius v
Auto(A9)	Vans	T	13180	Ram Promaster City
Auto(S8)	Sport Utility Vehicles	T	502	Audi Q5 Hybrid
Auto(S7)	Midsize Cars	C	329	Infiniti Q70 HYBRID
Auto(AV-S	Sport Utility Vehicles	T	4735	Infiniti QX60 HYBRID AWD
Manual(M6	Sport Utility Vehicles	T	3003	Jeep Renegade 4x4
Auto(AV)	Sport Utility Vehicles	T	91736	Nissan ROGUE AWD
Auto(AV-S	Sport Utility Vehicles	T	4677	Lexus RX 450h
Auto(AV-S	Sport Utility Vehicles	T	12486	Lexus RX 450h AWD
Auto(A1)	Large Cars	C	70000	Tesla S
Auto(AV)	Midsize Cars	C	8603	Nissan SENTRA FE+
Auto(AM7)	Large Cars	C	13050	Hyundai Sonata
Auto(A1)	Small Station Wagons	C	1200	Kia Soul Electric
Auto(A1)	Subcompact Cars	C	2700	Chevrolet Spark EV
Auto(A1)	Sport Utility Vehicles	C	105	Hyundai Tucson Fuel Cell
Auto(AV)	Compact Cars	C	17803	Chevrolet Volt
Auto(S8)	Sport Utility Vehicles	T	7000	BMW X5 xDrive 35d
Auto(AV-S	Sport Utility Vehicles	T	41076	Subaru XV CROSSTREK
Auto(AV-S	Sport Utility Vehicles	T	7764	Subaru XV CROSSTREK HYBRID
Auto(AV)	Sport Utility Vehicles	T	5202	Nissan PATHFINDER Hybrid 2W
Auto(AV)	Sport Utility Vehicles	T	6359	Nissan PATHFINDER Hybrid 4W
Auto(AM7)	Midsize Station Wagons	T	5600	Mercedes-Benz GLA 250
Auto(AM7)	Sport Utility Vehicles	T	4587	Mercedes-Benz GLA 250 4MAT
Auto(AM7)	Sport Utility Vehicles	T	4587	Mercedes-Benz GLA 250 4MAT

Auto(AV)	Midsize Cars	C	10744	Toyota CAMRY HYBRID LE
Auto(AV)	Midsize Cars	C	26303	Toyota CAMRY HYBRID XLE/SE
Auto(A6)	Standard Pick-up Trucks	T	25	Chevrolet C15 SILVERADO 2WD
Auto(A6)	Standard Pick-up Trucks	T	6735	Chevrolet C15 SILVERADO 2WD
Auto(A6)	Standard Pick-up Trucks	T	6735	Chevrolet C15 SILVERADO 2WD
Auto(A6)	Standard Pick-up Trucks	T	38	GMC C15 SIERRA 2WD CAB CH
Auto(A6)	Standard Pick-up Trucks	T	2004	GMC C15 SIERRA 2WD Crew Ca
Auto(A6)	Standard Pick-up Trucks	T	2004	GMC C15 SIERRA 2WD Crew Ca
Auto(A8)	Standard Pick-up Trucks	T	3227	Ram 1500 4X2 - Crew Cab, 6'4"
Auto(A8)	Standard Pick-up Trucks	T	12793	Ram 1500 4X2 - Crew Cab, 6'4"
Auto(A8)	Standard Pick-up Trucks	T	3227	Ram 1500 4X2 - Regular Cab, 8
Auto(A8)	Standard Pick-up Trucks	T	3960	Ram 1500 4X2 - Regular Cab, 8
Auto(A8)	Standard Pick-up Trucks	T	10192	Ram 1500 4X2 - Regular Cab, 8
Auto(A8)	Standard Pick-up Trucks	T	12793	Ram 1500 4X4 - Regular Cab, 8
Auto(S6)	Standard Pick-up Trucks	T	7388	Ford F150 PICKUP 2WD
Auto(S6)	Standard Pick-up Trucks	T	7388	Ford F150 PICKUP 2WD
Auto(S6)	Standard Pick-up Trucks	T	7388	Ford F150 PICKUP 2WD
Auto(S6)	Standard Pick-up Trucks	T	7388	Ford F150 PICKUP 2WD
Auto(S6)	Standard Pick-up Trucks	T	6566	Ford F150 PICKUP 2WD
Auto(S6)	Standard Pick-up Trucks	T	6566	Ford F150 PICKUP 2WD
Auto(S6)	Standard Pick-up Trucks	T	6566	Ford F150 PICKUP 2WD
Auto(S6)	Standard Pick-up Trucks	T	6566	Ford F150 PICKUP 2WD
Auto(A6)	Standard Pick-up Trucks	T	15689	Ford F150 PICKUP 2WD FFV
Auto(A6)	Standard Pick-up Trucks	T	15689	Ford F150 PICKUP 2WD FFV
Auto(S6)	Standard Pick-up Trucks	T	23443	Ford F150 PICKUP 4WD
Auto(S6)	Standard Pick-up Trucks	T	23443	Ford F150 PICKUP 4WD
Auto(A6)	Standard Pick-up Trucks	T	4074	Ford F150 PICKUP 4WD FFV
Auto(A1)	Large Cars	C	25000	Tesla S (60 kWh)
Auto(A1)	Large Cars	C	10000	Tesla S (85 kWh)
Auto(A1)	Large Cars	C	15000	Tesla S AWD
Auto(A1)	Large Cars	C	10000	Tesla S AWD - 85D
Auto(A1)	Large Cars	C	10000	Tesla S AWD - P85D

Drive

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brid FWD

MATIC

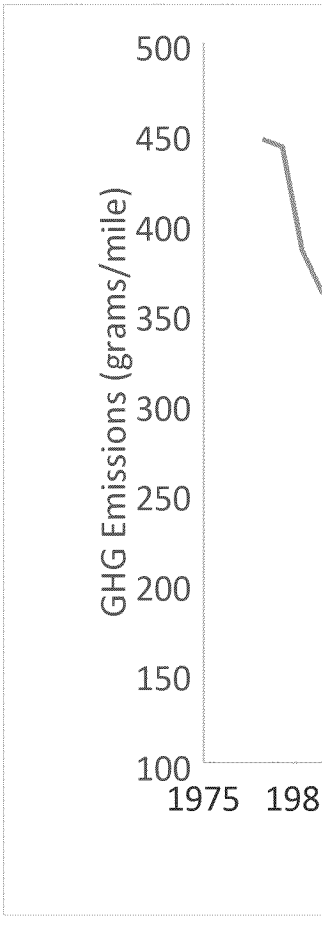
WD
WD LE Plus

D
D

IC
IC

CAB CHASSIS
Crew Cab, Short Box
Crew Cab, Standard Box
ASSIS
b, Short Box
b, Standard Box
Box
Box
'0" Box
'0" Box
'0" Box
'0" Box

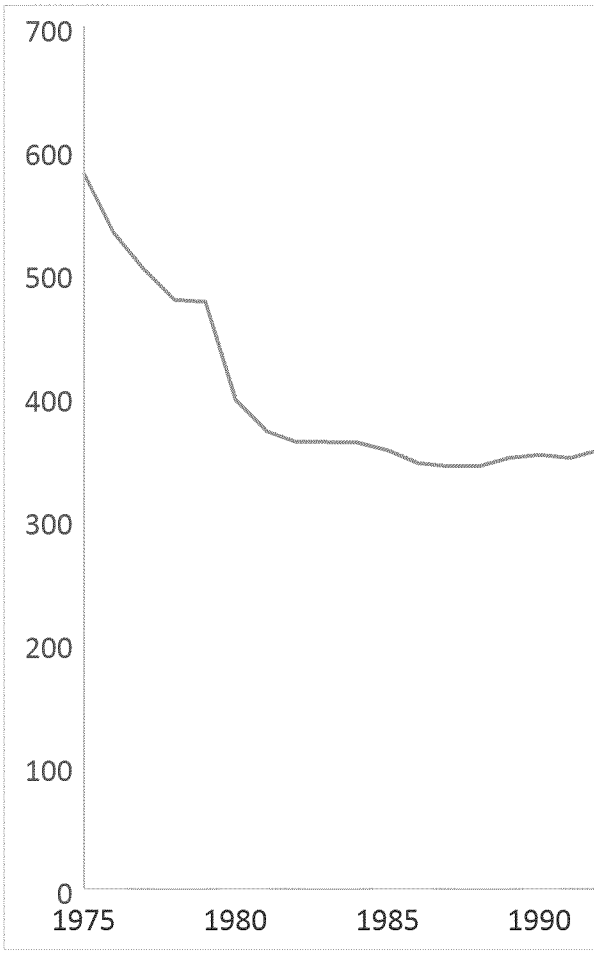
	car	truck	combined car	truck	combined
1975					
1976					
1977					
1978			19.9		446.58291
1979			20.1		442.13930
1980			23.1		384.71861
1981			24.6		361.26016
1982			25.1		354.06375
1983			24.8		358.34677
1984			25		355.48
1985			25.4		349.88189
1986			25.9		343.12741
1987			26.2		339.19847
1988			26		341.80769
1989			25.6		347.14844
1990			25.4		349.88189
1991			25.6		347.14844
1992			25.1		354.06375
1993			25.2		352.65873
1994			24.7		359.79757
1995			24.9		356.90763
1996			24.9		356.90763
1997			24.6		361.26016
1998			24.7		359.79757
1999			24.5		362.73469
2000			24.8		358.34677
2001			24.5		362.73469
2002			24.7		359.79757
2003			25.1		354.06375
2004			24.6		361.26016
2005			25.4		349.88189
2006			25.8		344.45736
2007			26.6		334.09774
2008			27.1		327.93358
2009			29		306.44828
2010			29.3		303.31058
2011			29		306.44828
2012				249 348 288	2013 compliance report
2013				241 339 279	
2014				247 326 276	2012 FRM Table I.B.2-4
2015				236 312 263	



2016			225	298	250
2017			212	295	243
2018			202	286	232
2019			191	277	222
2020			182	269	213
2021			172	249	199
2022			164	237	190
2023			157	225	180
2024			150	214	171
2025			143	203	163

2016 FRM Table III-2, 3, 4

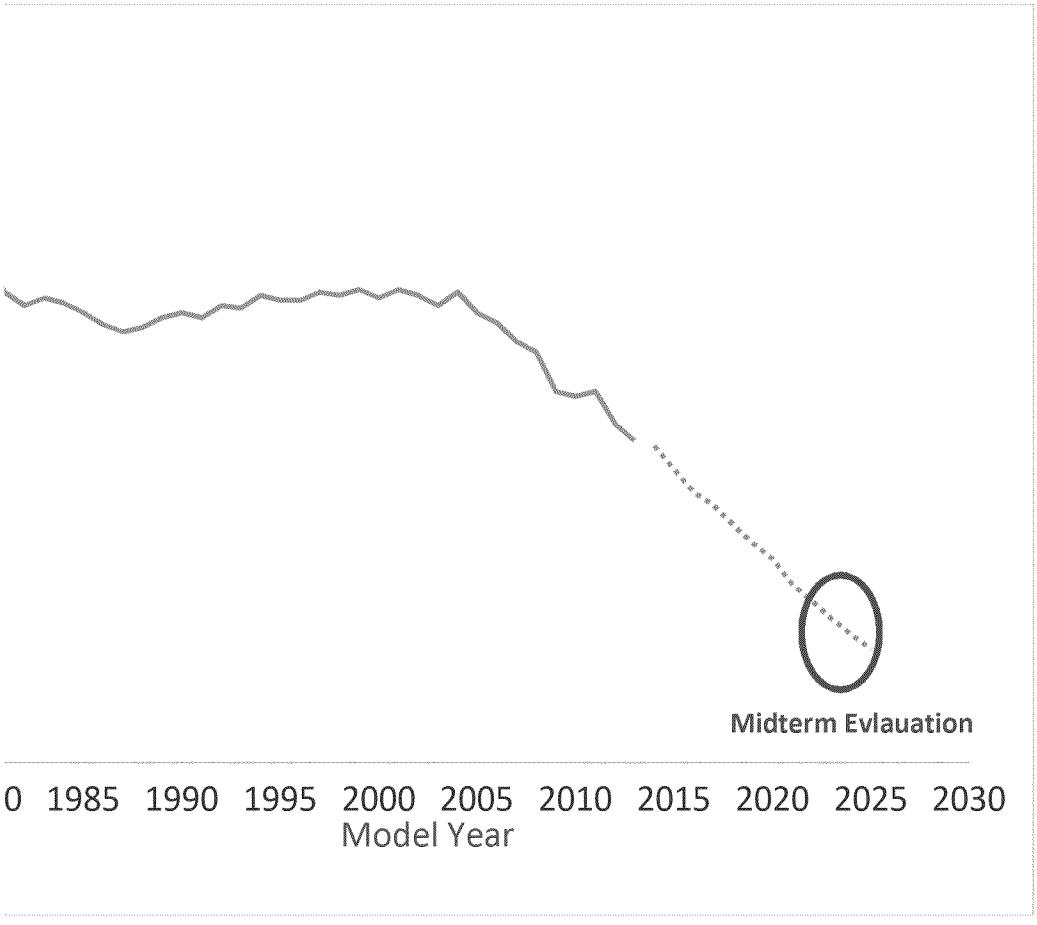
MODEL_YE	unadj5545	conv. Fact	g/mile
1975	15.3	8889	581
1976	16.7	8890	532
1977	17.7	8892	502
1978	18.6	8899	478
1979	18.7	8913	477
1980	22.5	8942	397
1981	24.1	8963	372
1982	24.7	8959	363
1983	24.6	8921	363
1984	24.6	8911	362
1985	25	8899	356
1986	25.7	8893	346
1987	25.9	8890	343
1988	25.9	8888	343
1989	25.4	8888	350
1990	25.2	8888	353
1991	25.4	8889	350
1992	24.9	8888	357
1993	25.1	8887	354
1994	24.6	8887	361
1995	24.7	8887	360
1996	24.8	8888	358
1997	24.5	8888	363
1998	24.5	8888	363
1999	24.1	8888	369
2000	24.3	8889	366
2001	24.2	8889	367
2002	24.1	8890	369
2003	24.3	8889	366
2004	24	8889	370
2005	24.8	8891	359
2006	25.2	8892	353

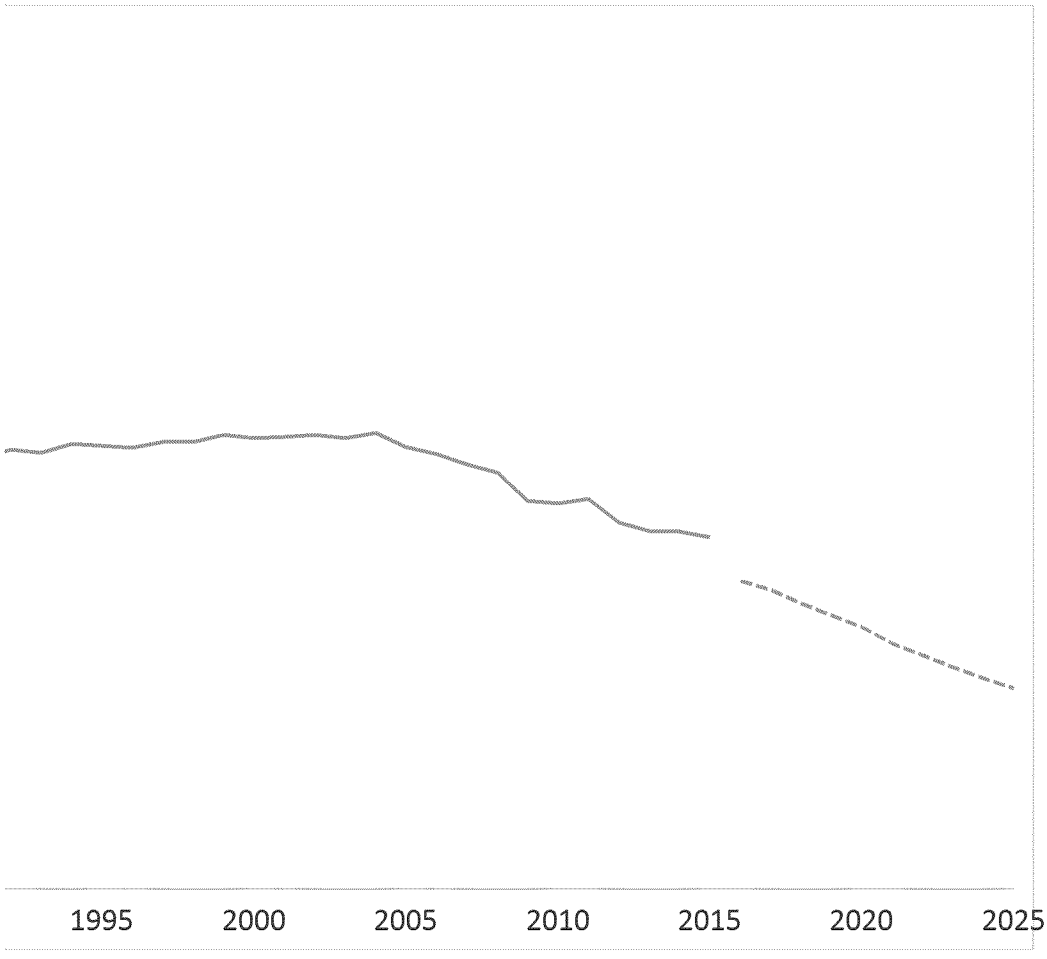


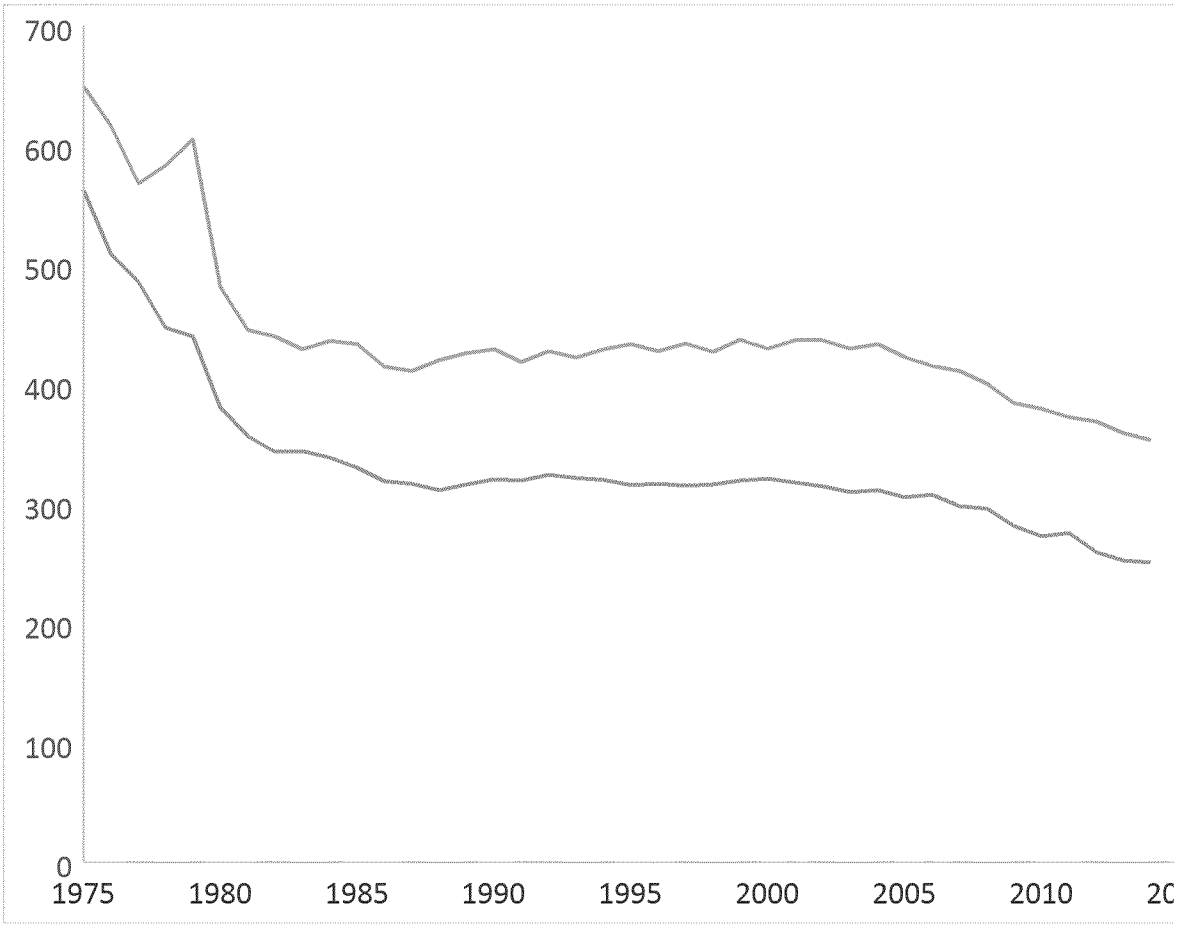
2007	25.8	8888	344
2008	26.3	8889	338
2009	28.2	8894	315
2010	28.4	8896	313
2011	28.1	8897	317
2012	29.9	8899	298
2013	30.6	8899	291
2014	30.7	8900	290
2015	31.2	8906	285
2016			250
2017			243
2018			232
2019			222
2020			213
2021			199
2022			190
2023			180
2024			171
2025			163

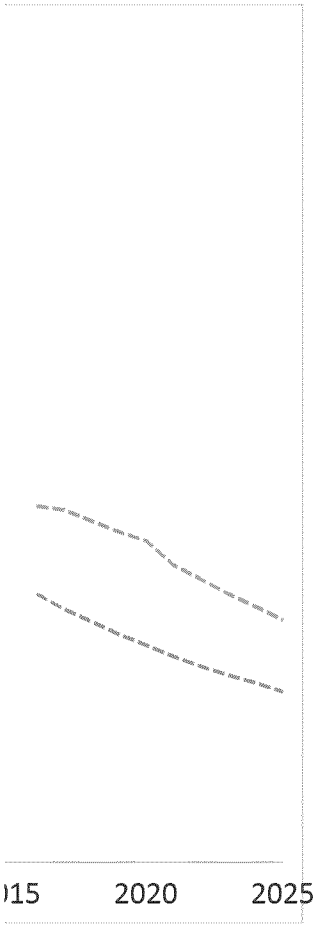
MODEL_YE	Car FE	% diesel	conversio	rg/mile	Truck FE			
1975	15.8	0.2%	8890	563	13.7		8887	650
1976	17.5	0.3%	8891	509	14.4		8887	617
1977	18.3	0.5%	8893	486	15.6		8887	568
1978	19.9	0.9%	8899	448	15.3	0.8%	8897	583
1979	20.2	2.1%	8914	440	14.7	1.8%	8910	605
1980	23.5	4.4%	8944	381	18.6	3.5%	8932	481
1981	25.1	5.9%	8963	357	20.1	5.6%	8959	446
1982	26.0	4.7%	8948	344	20.5	9.4%	9009	440
1983	25.9	2.1%	8914	344	20.8	4.8%	8949	430
1984	26.3	1.7%	8909	339	20.4	2.4%	8918	436
1985	26.9	0.9%	8899	330	20.5	1.1%	8901	434
1986	27.9	0.3%	8891	319	21.4	0.7%	8896	415
1987	28.0	0.2%	8890	317	21.6	0.3%	8891	411
1988	28.5	0.0%	8887	312	21.1	0.2%	8890	420
1989	28.1	0.0%	8887	317	20.9	0.2%	8890	426
1990	27.7	0.0%	8887	320	20.7	0.2%	8890	429
1991	27.8	0.1%	8888	320	21.2	0.1%	8888	419
1992	27.4	0.1%	8888	325	20.8	0.1%	8888	428
1993	27.6	0.0%	8887	322	21.0		8887	422
1994	27.7	0.0%	8887	320	20.7		8887	429
1995	28.1	0.1%	8888	316	20.5		8887	434
1996	28.0	0.1%	8888	317	20.8	0.1%	8888	428
1997	28.2	0.1%	8888	315	20.5	0.0%	8887	434
1998	28.1	0.2%	8890	316	20.8	0.0%	8887	428

1999	27.8	0.2%	8890	320	20.3	0.0%	8887	438
2000	27.7	0.2%	8890	321	20.7		8887	430
2001	27.9	0.2%	8890	318	20.3		8887	437
2002	28.3	0.4%	8892	315	20.3		8887	437
2003	28.7	0.3%	8891	310	20.7		8887	430
2004	28.5	0.3%	8891	312	20.5	0.0%	8887	434
2005	29.1	0.4%	8892	306	21.0	0.1%	8888	423
2006	28.9	0.6%	8895	308	21.4	0.1%	8888	416
2007	29.8	0.0%	8887	298	21.6	0.1%	8888	411
2008	30.1	0.1%	8888	296	22.2	0.2%	8890	401
2009	31.6	0.6%	8895	281	23.1	0.3%	8891	385
2010	32.6	0.9%	8899	273	23.4	0.4%	8892	379
2011	32.3	0.9%	8899	276	23.9	0.5%	8893	373
2012	34.3	1.0%	8900	259	24.1	0.7%	8896	369
2013	35.2	1.2%	8903	253	24.8	0.5%	8893	359
2014	35.5	1.5%	8906	251	25.2	1.6%	8908	353
2015								
2016				225				298
2017				212				295
2018				202				286
2019				191				277
2020				182				269
2021				172				249
2022				164				237
2023				157				225
2024				150				214
2025				143				203


Midterm Evlauation
0 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030
Model Year


1995
2000
2005
2010
2015
2020
2025


700
600
500
400
300
200
100
0
1975
1980
1985
1990
1995
2000
2005
2010
20


)15
2020
2025

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Wed 9/16/2015 4:48:16 PM
Subject: Decision information

Hello Jim,

I have submitted a Decision Information file for tests Ex. 4 - CBI
Ex. 4 - CBI
Ex. 4 - CBI No manufacturer confirmatory tests are required. No re-labeling is expected.

Regards,

Bill Rodgers

Emissions Certification Engineer

Volkswagen Group

3800 Hamlin Rd

Auburn Hills, MI 48326

p. (248) 754-4219

To: Pickell, Casey[Pickell.Casey@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/16/2015 5:09:20 PM
Subject: research his title please

David Geanacopoulos

Executive Vice President for Public Affairs and General Counsel

Volkswagen Group of America, Inc.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Bunker, Byron
Location: Conf Call
Importance: Normal
Subject: Accepted: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

To: Belser, Evan[Belser.Evan@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]; Allen, Leslie (ENRD)[Leslie.Allen@usdoj.gov]; karen.dworkin@usdoj.gov[karen.dworkin@usdoj.gov]
From: Engel, Bethany (ENRD)
Sent: Wed 9/16/2015 5:33:34 PM
Subject: RE: Confidentiality Among Co-Plaintiffs in VW case
ENV_ENFORCEMENT-#2546128-v1-VW__draft_conf_agt_with_CA.DOC

Attorney Work Product

Attorney-Client Communication

Evan and Meetu,

Ex. 5, 7

Thanks,

Beth

Bethany Engel

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

202.514.6892 (ph)

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

From: Engel, Bethany (ENRD)
Sent: Tuesday, September 15, 2015 4:48 PM
To: 'Belser, Evan' <Belser.Evan@epa.gov>; Dworkin, Karen (ENRD) <KDworkin@ENRD.USDOJ.GOV>
Cc: Van Eaton, Josh (ENRD) <JVanEaton@ENRD.USDOJ.GOV>; Allen, Leslie (ENRD) <LAllen@ENRD.USDOJ.GOV>
Subject: RE: Confidentiality Among Co-Plaintiffs in VW case

Perfect. Thank you.

Bethany Engel

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

202.514.6892 (ph)

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

From: Belser, Evan [mailto:Belser.Evan@epa.gov]
Sent: Tuesday, September 15, 2015 4:43 PM
To: Engel, Bethany (ENRD) <BEngel@ENRD.USDOJ.GOV>; Dworkin, Karen (ENRD) <KDworkin@ENRD.USDOJ.GOV>
Cc: Van Eaton, Josh (ENRD) <JVanEaton@ENRD.USDOJ.GOV>; Allen, Leslie (ENRD) <LAllen@ENRD.USDOJ.GOV>
Subject: RE: Confidentiality Among Co-Plaintiffs in VW case

From: Engel, Bethany (ENRD) [mailto:Bethany.Engel@usdoj.gov]
Sent: Tuesday, September 15, 2015 4:41 PM
To: karen.dworkin@usdoj.gov; Belser, Evan
Cc: Van Eaton, Josh (ENRD); Allen, Leslie (ENRD)
Subject: RE: Confidentiality Among Co-Plaintiffs in VW case

Ex. 5, 7

Thanks,

Beth

Bethany Engel

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

202.514.6892 (ph)

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

From: Dworkin, Karen (ENRD)
Sent: Tuesday, September 15, 2015 9:10 AM
To: Belser, Evan <Belser.Evan@epa.gov>
Cc: Van Eaton, Josh (ENRD) <JVanEaton@ENRD.USDOJ.GOV>; Engel, Bethany (ENRD) <BEngel@ENRD.USDOJ.GOV>; Allen, Leslie (ENRD) <LAllen@ENRD.USDOJ.GOV>
Subject: RE: Confidentiality Among Co-Plaintiffs in VW case

4:00 Wednesday would work better for us.

From: Belser, Evan [mailto:Belser.Evan@epa.gov]
Sent: Monday, September 14, 2015 9:14 PM
To: Dworkin, Karen (ENRD) <KDworkin@ENRD.USDOJ.GOV>
Cc: Van Eaton, Josh (ENRD) <JVanEaton@ENRD.USDOJ.GOV>; Engel, Bethany (ENRD) <BEngel@ENRD.USDOJ.GOV>; Allen, Leslie (ENRD) <LAllen@ENRD.USDOJ.GOV>
Subject: Re: Confidentiality Among Co-Plaintiffs in VW case

Thanks Karen. I think a call would be the best way forward. This Wednesday after 3pm sometime? Feel free to propose times that work for you.

Evan

From: Dworkin, Karen (ENRD) <Karen.Dworkin@usdoj.gov>
Sent: Monday, September 14, 2015 3:30 PM
To: Belser, Evan
Cc: Van Eaton, Josh (ENRD); Engel, Bethany (ENRD); Allen, Leslie (ENRD)
Subject: Confidentiality Among Co-Plaintiffs in VW case

Evan, it would be helpful to have a better idea of what you are thinking about for Thursday and beyond with respect to the role of the states. Do you have time for a quick call with us?

From: Belser, Evan [mailto:Belser.Evan@epa.gov]
Sent: Sunday, September 13, 2015 10:08 PM
To: Dworkin, Karen (ENRD) <KDworkin@ENRD.USDOJ.GOV>; Allen, Leslie (ENRD) <LAllen@ENRD.USDOJ.GOV>

Cc: Werner, Jacqueline <Werner.Jacqueline@epa.gov>; Brooks, Phillip <Brooks.Phillip@epa.gov>
Subject: Confidentiality Among Co-Plaintiffs in VW case

Hello Karen and Leslie,

Ex. 5, 7

Thanks,
Evan

From: Belser, Evan
Location: 866-299-3188; enter Non-Responsive
Importance: Normal
Subject: Confidentiality among plaintiffs in VW case
Start Date/Time: Wed 9/16/2015 8:00:00 PM
End Date/Time: Wed 9/16/2015 9:00:00 PM

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Fisherow, Walter Benjamin (ENRD)
Sent: Wed 9/16/2015 5:39:13 PM
Subject: RE: VW

Nope.

-----Original Message-----
From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Wednesday, September 16, 2015 11:04 AM
To: Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
Subject: Re: VW

Do you need a list of names?

Sent from my iPhone

> On Sep 16, 2015, at 10:51 AM, Fisherow, Walter Benjamin (ENRD)
<Walter.Benjamin.Fisherow@usdoj.gov> wrote:
>
> The regular AG conference room (Non-Responsive). After talking to you yesterday, Bruce and I spent a half hour with John. He's going to be very interested tomorrow.
>
> -----Original Message-----
> From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
> Sent: Wednesday, September 16, 2015 10:50 AM
> To: Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
> Subject: Re: VW
>
> Where is this meeting?
>
> Sent from my iPhone
>
>> On Sep 16, 2015, at 10:43 AM, Fisherow, Walter Benjamin (ENRD)
<Walter.Benjamin.Fisherow@usdoj.gov> wrote:
>>
>> Yep, fine.
>>
>> -----Original Message-----
>> From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
>> Sent: Wednesday, September 16, 2015 6:00 AM
>> To: Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
>> Subject: VW
>>
>> It titties list for the meeting with John seems to have grown considerably. I had originally thought it was intended to be a small gathering. Given the current size of the list, it will be difficult for me not to bring two more people who are on our team. I trust that is OK.
>>
>> Sent from my iPhone

From: Kaul, Meetu
Location: Non-Responsive
Importance: Normal
Subject: Accepted: Confidentiality among plaintiffs in VW case
Start Date/Time: Wed 9/16/2015 8:00:00 PM
End Date/Time: Wed 9/16/2015 9:00:00 PM

From: Kaul, Meetu
Location: 866-299-3188; ent
Importance: Normal
Subject: Accepted: Confidentiality among plaintiffs in VW case
Start Date/Time: Wed 9/16/2015 8:00:00 PM
End Date/Time: Wed 9/16/2015 9:00:00 PM

Non-Responsive

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF KENTUCKY
AT PADUCAH

FILED ELECTRONICALLY

CLINT HISER and)
KAREN HISER, Individually and as)
Parents and next friends of)
SHELBY HISER)
)
PLAINTIFFS)
)
v.) CASE NO. 5:14-CV-00170-TBR
)
VOLKSWAGEN GROUP OF AMERICA, INC., et al.)
)
DEFENDANTS)

* * * * * * *

RULE 7.1 CORPORATE DISCLOSURE STATEMENT OF DEFENDANT VOLKSWAGEN GROUP OF AMERICA, INC.

Pursuant to Rule 7.1 of the Federal Rules of Civil Procedure, Defendant Volkswagen Group of America, Inc., ("VWGoA") former ly known as Volkswagen of America, Inc., states that it is a wholly-owned sub sidiary of Volkswagen AG, and none of its shares are publicly traded.

Respectfully submitted,

/s/ David T. Schaefer
David T. Schaefer

Anne K. Guillory
DINSMORE & SHOHL LLP
101 South Fifth Street, Suite 2500
Louisville, Kentucky 40202
Phone: (502) 581-8000
Fax: (502) 581-8111

david.schaefer@dinsmore.com
anne.guillory@dinsmore.com
Counsel for Defendant,
Volkswagen Group of America, Inc.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing was this 23rd d ay of September, 2014 electronically filed through the CM/ECF system and a copy served via the Court's CM/ECF system upon:

Curtis J. Hamilton, III
Curt Hamilton Law Office PLLC
110 North Main Street
P.O. Box 2
Henderson, KY 42419-0002
Co-counsel for Plaintiffs

David V. Scott
4965 U.S. Hwy. 42, Suite 1000
Louisville, KY 40222
Co-counsel for Plaintiffs

/s/ David T. Schaefer
Counsel for Defendant

7275332v1

VW FOIA, EPA 06/20/2017 2017-FFP_023717

UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF MASSACHUSETTS

VOLKSWAGEN OF AMERICA, INC., AN OPERATING UNIT OF VOLKSWAGEN GROUP OF AMERICA, INC.,

Plaintiff

v.

U.S. AUTO GROUP OF MASSACHUSETTS,

Defendant

Civil Action
No. 1:15-CV-10636-RGS

CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Civil Procedure 7.1 and Local Rule 7.3(A), the Plaintiff, Volkswagen of America, Inc., an operating unit of Volkswagen Group of America, Inc. (the "Plaintiff") hereby certifies that the following are parents, subsidiaries and/or affiliates of said party that have issued shares or debt securities to the public and/or are publicly held corporations owning ten (10%) percent or more of its stock: Volkswagen AG, which is a publicly traded German company. Counsel further notes that Porsche Automobil Holding SE is a publicly traded German company that holds an interest in Volkswagen AG that is greater than ten (10%) percent.

VOLKSWAGEN OF AMERICA, INC.,

By Its Attorneys,
RIEMER & BRAUNSTEIN LLP

Date: March 5, 2015

/s/ Joseph R. Valle, Jr.
Joseph R. Valle, Jr., BBO #550291
Riemer & Braunstein LLP
Three Center Plaza
Boston, Massachusetts 02108
(617) 880-3454
jvalle@riemerlaw.com

1713642.1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 14-20107-CIV-MORENO-O'SULLIVAN

SANDRA SPEIER-ROCHE,
individually, and on behalf of a
class of similarly situated individuals,

Plaintiff,

vs.

VOLKSWAGEN GROUP OF
AMERICA, INC. d/b/a AUDI OF
AMERICA, INC., AUDI AG and
VOLKSWAGEN AG,

Defendants.
_____/

DEFENDANT, VOLKSWAGEN GROUP OF AMERICA, INC.'S CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Civil Procedure 7.1(a), Defendant, VOLKSW AGEN GROUP OF AMERICA, INC. ("VWGoA"), hereby discloses the following:

One hundred percent (100%) of the common stock of VWGoA is owned by Volks wagen AG, a publicly traded German corporation.

Dated: April 7, 2014

Respectfully submitted,

s/ Michael D. Begey

LARRY M. ROTH, ESQUIRE
Florida Bar No. 0208116
Email: lroth@rumberger.com
MICHAEL D. BEGEY, ESQUIRE
Florida Bar No. 0120928
Email: mbegey@rumberger.com
RUMBERGER, KIRK & CALDWELL
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Lincoln Plaza, Suite 1400
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Post Office Box 1873
Orlando, Florida 32802-1873

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Telecopier: (407) 841-2133

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New York, New York 10004
Telephone: (212) 471-8500
Telecopier: (212) 344-3333

Attorneys for Defendant,
Volkswagen Group of America, Inc.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foreg oing was served by electronically filing with the Clerk of the Court using CM/ECF on April 7, 2014, on all counsel or parties of record on the Service List below.

s/ Michael D. Begey

LARRY M. ROTH, ESQUIRE
Florida Bar No. 0208116
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Telephone: (407) 872-7300
Telecopier: (407) 841-2133

- *Of Counsel* -
JEFFREY L. CHASE, ESQUIRE
Email: jchase@herzfeld-rubin.com

VW FOIA, EPA 06/20/2017 2017-FFP_023720

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New York, New York 10004
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Telecopier: (212) 344-3333

Attorneys for Defendant,
Volkswagen Group of America, Inc.

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Adam M. Slater, Esquire
aslater@mskf.net
MAZIE SLATER KATZ & FREEMAN, LLC
103 Eisenhower Parkway
Roseland, NJ 07068
Attorneys for Plaintiff

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 9/16/2015 6:34:53 PM
Subject: P.M. NEWSCAST: Sergio on 'maturing' relationship with UAW | Renault to power Smart EVs | Suzuki's costly split with VW | Hyundai's high-performance hopes | Honda Civic's big day

September 16, 2015

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Renault to power Smart »

Suzuki's costly split »

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Automotive News
1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Wed 9/16/2015 6:35:10 PM
Subject: P.M. NEWSCAST: Sergio on 'maturing' relationship with UAW | Renault to power Smart EVs | Suzuki's costly split with VW | Hyundai's high-performance hopes | Honda Civic's big day

September 16, 2015

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Follow Tom

TOP STORY: Sergio on 'maturity'

Renault to power Smart »

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Automotive News
1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Starfield, Lawrence[Starfield.Lawrence@epa.gov]
From: Brooks, Phillip
Sent: Wed 9/16/2015 6:53:00 PM
Subject: Fwd: VW - Revised NOV
VW NOV Draft 9_16_15v2.docx
ATT00001.htm

Sent from my iPhone

Begin forwarded message:

From: "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>
Date: September 16, 2015 at 2:35:09 PM EDT

Ex. 7

Cc: "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Belser, Evan" <Belser.Evan@epa.gov>, "Orehowsky, Gregory" <Orehowsky.Gregory@epa.gov>, "Kaul, Meetu" <Kaul.Meetu@epa.gov>, "Bunker, Byron" <bunker.byron@epa.gov>, "Wehrly, Linc" <wehrly.linc@epa.gov>, "Kataoka, Mark" <Kataoka.Mark@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>, "Senn, John" <Senn.John@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>
Subject: FW: VW - Revised NOV

FYI – below please see Meetu's latest version on the VW NOV. Please circulate to your people as appropriate.

Thanks,

Jacqueline

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

From: Kaul, Meetu
Sent: Wednesday, September 16, 2015 1:55 PM
To: Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Bunker, Byron; Wehrly, Linc
Cc: Van Eaton, Josh (ENRD); Engel, Bethany (ENRD); Kataoka, Mark; Orehowsky, Gregory
Subject: VW - Revised NOV

Thanks for comments received thus far. Here is the next iteration.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Ex. 6
Sent: Wed 9/16/2015 6:55:14 PM
Subject: VW Corporate Structure
VWCorporateStructure_091615.docx
VW Corporate Diagram.pdf

Meetu,

Attached is an updated corporate structure chart and a simpler chart showing the setup I found online. In the VW America section, Mr. Geanacopoulos's title is included. I'm about to go to class for the day but I'll be back tomorrow at 9 if you need anything else for this.

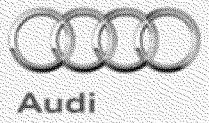
Thanks,

Ex. 6

VOLKSWAGEN
AKTIENGESELLSCHAFT

Automotive Division

Passenger Cars



Remaining companies

Commercial Vehicles / Power Engineering

Commercial Vehicles

Financial Services Division

Volkswagen Financial Services

VOLKSWAGEN FINANCIAL SERVICES
AKTIENGESELLSCHAFT

Europe / Asia-Pacific / North and South America

Financial Services
USA / Canada / Spain / Argentina

Scania Financial Services

Porsche Holding Financial Services

Porsche Financial Services

VOLKSWAGEN

AKTIENGESELLSCHAFT

Automotive Division

Passenger Cars

Remaining companies

Commercial Vehicles / Power Engineering

Financial Services Division

Volkswagen Financial Services

VOLKSWAGEN FINANCIAL SERVICES

AKTIENGESELLSCHAFT

Europe / Asia-Pacific / North and South America

Financial Services

USA / Canada / Spain / Argentina

Scania Financial Services

Porsche Holding Financial Services

Porsche Financial Services

From: Cruden, John (ENRD)
Location: RFK 2143 - Call in (866) 410-9426; cc Non-Responsive
Importance: Normal
Subject: FW: Volkswagen Meeting
Start Date/Time: Thur 9/17/2015 2:00:00 PM
End Date/Time: Thur 9/17/2015 3:00:00 PM

;;
-----Original Appointment-----
From: Cruden, John (ENRD)
Sent: Monday, September 14, 2015 1:13 PM
To: Cruden, John (ENRD); Fisherow, Walter Benjamin (ENRD); Gelber, Bruce (ENRD); Dworkin, Karen (ENRD); Allen, Leslie (ENRD); Van Eaton, Josh (ENRD); Engel, Bethany (ENRD); Poux, Joseph (ENRD); Blackwell, Jennifer L. (ENRD); Williams, Jean (ENRD)
Cc: Parker, Doug; Harris, Deborah (ENRD)
Subject: Volkswagen Meeting
When: Thursday, September 17, 2015 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: RFK 2143 - Call in (866) 410-9426; cc Non-Responsive

From: Cruden, John (ENRD)
Location: RFK 2143 - Call in (866) 410-9426; cc
Importance: Normal
Subject: FW: Volkswagen Meeting
Start Date/Time: Thur 9/17/2015 2:00:00 PM
End Date/Time: Thur 9/17/2015 3:00:00 PM

Non-Responsive

;;
-----Original Appointment-----
From: Cruden, John (ENRD)
Sent: Monday, September 14, 2015 1:13 PM

Ex. 7

Subject: Volkswagen Meeting
When: Thursday, September 17, 2015 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: RFK 2143 - Call in (866) 410-9426; cc Non-Responsive

To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Werner, Jacqueline
Sent: Wed 9/16/2015 7:31:29 PM
Subject: Fwd: VW

Just FYI so you know not to expect something from Senn. Ok?

Thanks,
jj

Sent from my iPhone
Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

Begin forwarded message:

From: "Senn, John" <Senn.John@epa.gov>
Date: September 16, 2015 at 2:57:23 PM EDT
To: "Belser, Evan" <Belser.Evan@epa.gov>
Cc: "Conger, Nick" <Conger.Nick@epa.gov>, "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>
Subject: RE: VW

will do--look for something from me in a bit.

From: Belser, Evan
Sent: Wednesday, September 16, 2015 2:54 PM
To: Senn, John
Cc: Conger, Nick; Brooks, Phillip; Werner, Jacqueline
Subject: Re: VW

Thank you John that would be great. Ex. 6
Ex. 6 Please send your draft to me and Jacqueline and we will work with you. Meetu's plate is full.

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 16, 2015, at 2:53 PM, Senn, John <Senn.John@epa.gov> wrote:

I am happy to get started on the Q/A right now unless anyone in AED prefers to do so...I will send a first cut to Evan & Meetu ASAP.

From: Conger, Nick

Sent: Wednesday, September 16, 2015 2:49 PM

To: Brooks, Phillip; Belser, Evan; Werner, Jacqueline; Senn, John

Subject: VW

For the press call, can you guys start pulling together the brief remarks (talking point form is fine) and the 5-10 key Q&As for Cynthia-only. Good for us to be working with OAR/OTAQ on the broader Q&A, but want to make sure we're focused on what our spokesperson should say.

Read out from her meeting with Administrator is that she wants a forward-leaning enforcement message – e.g. there should be no doubt that EPA is committed to holding major automakers accountable for illegal activities that harm public health.

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

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To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Werner, Jacqueline
Sent: Wed 9/16/2015 7:37:12 PM
Subject: Fwd: VW Q+As.docx OECA Weds. 9/16/2015
VW Q+As.docx
ATT00001.htm

FYI. I'm sure you have already seen this but just in case ...

Please let us know if you have any questions.

Thanks,
Jacqueline

Sent from my iPhone
Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

Begin forwarded message:

From: "Alexander, David" <Alexander.David@epa.gov>
Date: September 16, 2015 at 2:55:44 PM EDT
To: "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>, "Kaul, Meetu" <Kaul.Meetu@epa.gov>
Subject: FW: VW Q+As.docx OECA Weds. 9/16/2015

Jacqueline and Meetu,

Attached is what went to Janet and Linc (it is the same as forwarded to you at about 12:25 PM today.) I am still waiting for their input at this time.

D

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

From: Alexander, David
Sent: Wednesday, September 16, 2015 1:36 PM
To: Wehrly, Linc; Cohen, Janet
Subject: FW: VW Q+As.docx OECA Weds. 9/16/2015
Importance: High

Janet and Linc,

Thanks for your phone call! Attached please find a substantive draft of VW "Qs +As." Would you please:

a) Fill in answers regarding the several "Qs" for which no "As" are provided. Those items are ones which are clearly the sole province and present knowledge of OTAQ, and

b) Provide any comment on the others, making sure to use "track changes" on.

Thanks again!

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

From: Alexander, David
Sent: Wednesday, September 16, 2015 12:37 PM
To: Jacqueline Werner; Kaul, Meetu; Brooks, Phillip
Subject: VW Q+As.docx OECA Weds. 9/16/2015
Importance: High

Jacqueline and Meetu,

Ex. 5

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: alexander.david@epa.gov
Sent: Wed 9/16/2015 8:29:59 PM
Subject: Litigation Hold Notice Regarding Volkswagen American

Ex. 5, 7

Ex. 5, 7

To: Alexander, David[Alexander.David@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/16/2015 8:32:51 PM
Subject: VW

Volkswagen AG

Audi AG

Volkswagen Group of America, Inc.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Wed 9/16/2015 8:49:01 PM
Subject: DAILY: How UAW's FCA deal could set 'pattern' for GM, Ford bargaining | Supplier to pay $62 million fine | Could Buicks get Opel's 'floating' roofline? | BMW CEO Krueger 'feeling much better'

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UAW, Fiat Chrysler reach tentative labor deal

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BLOG: **DAVID BARKHOLZ**

Union speak: UAW's FCA deal sets floor for GM, Ford bargaining

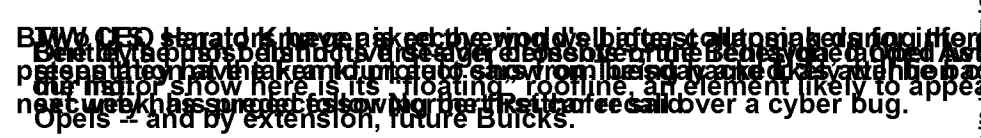
UAW President Dennis Williams was asked last night whether the union's tentative contract with Fiat Chrysler would serve as the pattern for deals with Ford and GM. Williams tortured the answer during the Q&A portion of a press briefing announcing the agreement.

Japanese supplier Kayaba to pay $62 million criminal fine for price-fixing conspiracy

Japanese supplier Kayaba agreed to plead guilty and pay a $62 million fine for its role in a conspiracy to fix the prices of shock absorbers sold to automakers in the U.S., federal prosecutors said today.

MOST READ (Last 7 days)

Products pack some power in UAW talks
Honda's redesigned 2016 Civic breaks cover
Google hires TrueCar's Krafcik to steer auto



BMW CEO Harald Krueger has picked the window of his first automated car for different parts of the day. Between 10 a.m. and 4 p.m. he prefers to be driven by the car, while he likes to drive himself in the morning and evening. Audi has unveiled at the motor show here its "floating" roofline, an element likely to appear on future Buicks, Chevrolets and Opels -- and by extension, future Buicks.

UAW names Fiat Chrysler lead target in contract talks
BMW CEO Krueger to drive himself at Frankfurt show

UAW, FCA pact ties worker bonus to long-term goals

The UAW-FCA tentative agreement: 'Expectations are very high'

UAW, Fiat Chrysler reach tentative labor deal

Jeep Wrangler production disrupted by small paint shop fire

Audi's EV push won't stop with e-tron quattro

Toyota: Decision on sports car project with BMW due soon

BLOG: RICHARD JOHNSON

The view of the global auto market from Germany? Not so bad

Hyundai waves big green flag for high-performance N line

Daimler N.A. to move headquarters, 30 jobs to Mich., governor says

BMW eyes new business opportunities with autonomous cars

Porsche CEO Mueller bids to run sports car brands in revamped VW

Renault will supply Daimler's Smart with electric motors

Suzuki's divorce from VW to cost it up to $3.9 billion

BMW will 'step up' digital features

Ford, Alcoa plan to replace more steel with aluminum in F-150

PSA will develop electric vehicle with Dongfeng

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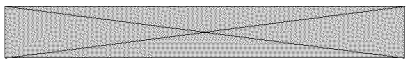


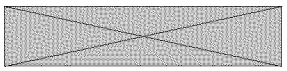
WEBINARS

» Sept. 22 at 2pm ET - Fixed Ops
by CDK Global

» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive

» Oct. 7 at 2pm ET - Programmatic
by Rocket Fuel



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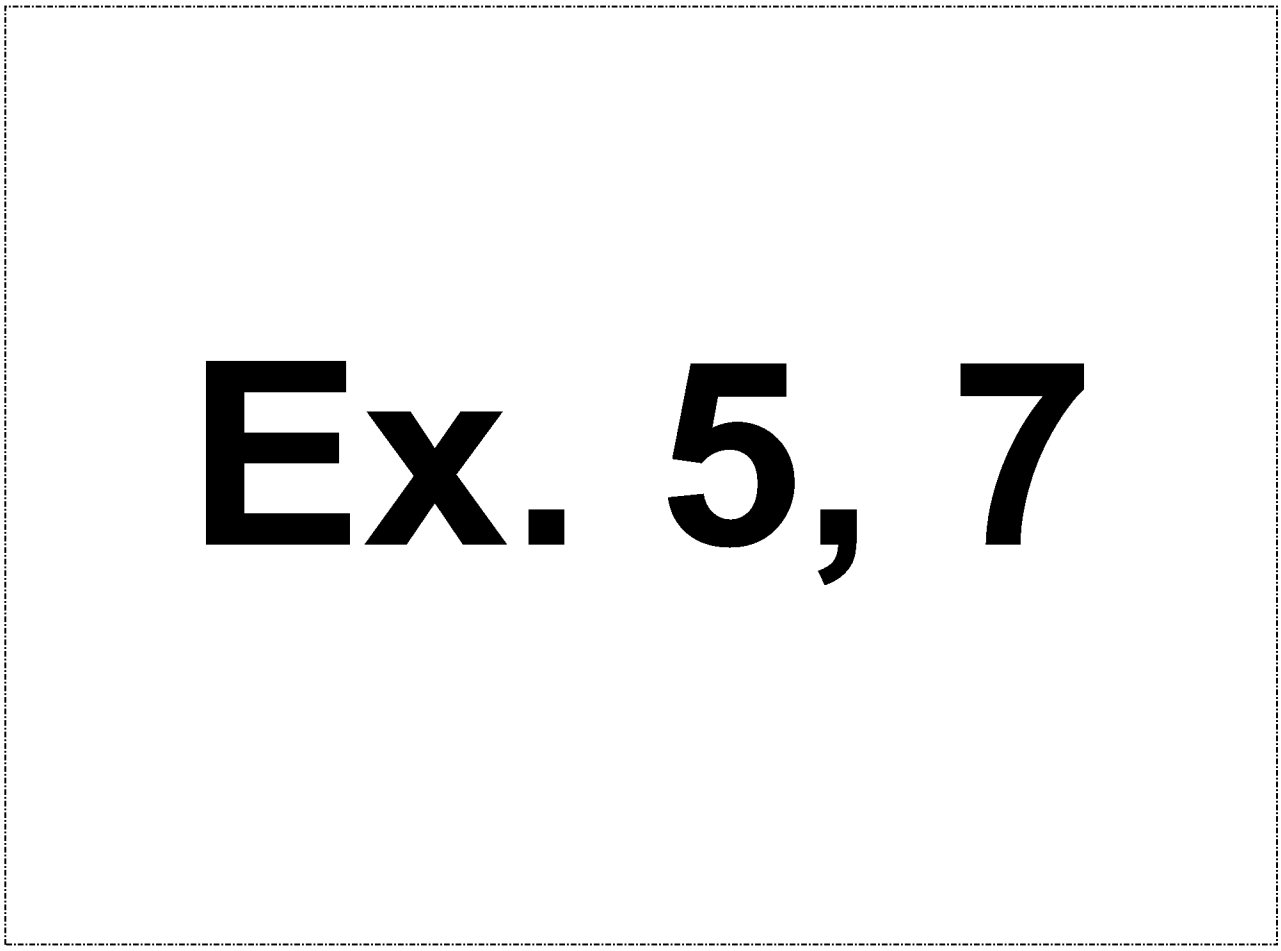
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: alexander.david@epa.gov
Sent: Wed 9/16/2015 9:05:22 PM
Subject: Litigation Hold Notice Regarding Volkswagen American



To: Charmley, William[charmley.william@epa.gov]
From: Grundler, Christopher
Sent: Wed 9/16/2015 10:01:08 PM
Subject: Re: Just checking in

Hey Bill. In my room reviewing notes for tomorrow while my mind is on the VW announcement Friday morning. [Non-Responsive]

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 16, 2015, at 4:50 PM, Charmley, William <charmley.william@epa.gov> wrote:
>
> Chris
>

Non-Responsive

>
>
> Bill Charmley
> Assessment and Standards Division
> Office of Transportation and Air Quality
> National Vehicle & Fuel Emissions Laboratory
> US Environmental Protection Agency
> Ann Arbor, Michigan
> Desk phone 734-214-4466
> Mobile phone 734-545-0333
> Email charmley.william@epa.gov

To: David.Geanacopoulos@vw.com[David.Geanacopoulos@vw.com]
From: Grundler, Christopher
Sent: Wed 9/16/2015 10:05:11 PM
Subject: Couldn't Wait

David-
I am tied up this evening and tomorrow morning I am speaking at an event. I will try to reach you tomorrow afternoon from the airport

Chris

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Ex. 7
Sent: Wed 9/16/2015 10:08:20 PM
Subject: Automatic reply: Ex. 5 Volkswagen American

I am out of the office until September 21. I will respond to your message when I return. If this is urgent, please call Ariana Rambuyan at 202.514.4414.

To: Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]
From: Kaul, Meetu
Sent: Wed 9/16/2015 10:21:42 PM
Subject: RE: VW plain English
VW NOV Draft 9_16_15v3.docx
VW Q+As.docx

Rosemarie,

Ex. 5

Thanks,

-Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kelley, Rosemarie
Sent: Wednesday, September 16, 2015 5:39 PM
To: Brooks, Phillip
Cc: Werner, Jacqueline; Belser, Evan; Kaul, Meetu; Shinkman, Susan
Subject: RE: VW plain English

I think that this looks good. Hopefully, Cynthia will agree.

Could one of you send me the latest version of the NOV and the OTAQ comms materials (e.g., Q&As etc). Thanks.

Rosemarie

From: Brooks, Phillip
Sent: Wednesday, September 16, 2015 4:50 PM
To: Giles-AA, Cynthia; Starfield, Lawrence; Shinkman, Susan; Kelley, Rosemarie
Cc: Werner, Jacqueline; Belser, Evan; Kaul, Meetu
Subject: FW: VW plain English

Here is a description of the case that Meetu prepared. It is pretty accessible. This could be used in a press statement or fact sheet. Happy to revise as needed.

Ex. 5, 7

Ex. 5, 7

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Shinkman, Susan
Sent: Wed 9/16/2015 10:21:46 PM
Subject: Automatic reply: VW plain English

I will be out of the office until Monday, September 28, 2015. If you need immediate assistance, please call 202-564-2220. Thank you, Susan

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Geanacopoulos, David
Sent: Wed 9/16/2015 10:23:31 PM
Subject: RE: Couldn't Wait

Thanks, Chris. Sorry about the missed connection. I will keep myself more accessible than today.
Thanks again.
Best regards,
David

-----Original Message-----
From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Wednesday, September 16, 2015 6:05 PM
To: Geanacopoulos, David
Subject: Couldn't Wait

David-
I am tied up this evening and tomorrow morning I am speaking at an event. I will try to reach you tomorrow afternoon from the airport

Chris

Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Alexander, David
Sent: Wed 9/16/2015 11:09:38 PM
Subject: VW: present LitHold custodians
VW Question for OECA to answer.docx

Meetu,

Ex. 5, 7

David

David E. Alexander, Attorney

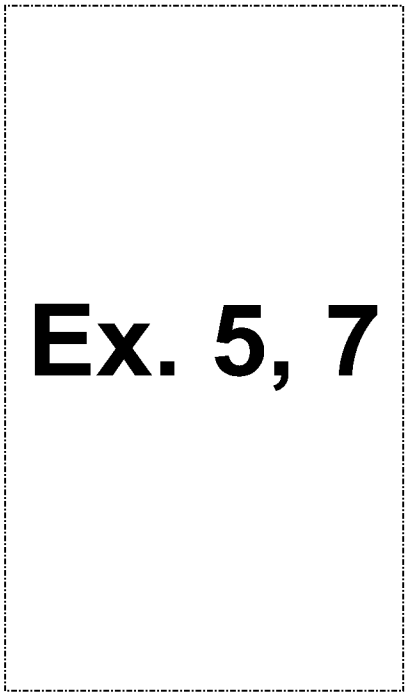
WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

From: Wehrly, Linc
Sent: Wednesday, September 16, 2015 10:03 AM
To: Kaul, Meetu; Werner, Jacqueline
Subject: Litigation Hold & OCA Questions

Meetu,


Ex. 5, 7

To: Alexander, David[Alexander.David@epa.gov]
Cc: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Cohen, Janet
Sent: Thur 9/17/2015 12:29:37 AM
Subject: Re: VW Q+As.docx OECA Weds. 9/16/2015

David, I incorporated your material into a q/a document that Erin Birgfeld is compiling. I will make sure that you get a review draft. Sorry about the confusion, there are a lot of moving parts here. - J. -

On Sep 16, 2015, at 6:59 PM, Alexander, David <Alexander.David@epa.gov> wrote:

Janet and Linc,

I don't believe we've had your input on the attached. Will you be able to get it to me on Thursday?

Thanks,

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

From: Alexander, David
Sent: Wednesday, September 16, 2015 1:36 PM
To: Wehrly, Linc; Cohen, Janet
Subject: FW: VW Q+As.docx OECA Weds. 9/16/2015
Importance: High

Janet and Linc,

Thanks for your phone call! Attached please find a substantive draft of VW "Qs +As." Would you please:

a) Fill in answers regarding the several "Qs" for which no "As" are provided. Those items are ones which are clearly the sole province and present knowledge of OTAQ, and

b) Provide any comment on the others, making sure to use "track changes" on.

Thanks again!

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

From: Alexander, David
Sent: Wednesday, September 16, 2015 12:37 PM
To: Jacqueline Werner; Kaul, Meetu; Brooks, Phillip
Subject: VW Q+As.docx OECA Weds. 9/16/2015
Importance: High

Jacqueline and Meetu,

Ex. 5

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

<VW Q+As.docx>

To: Walter Benjamin Fisherow[Walter.Benjamin.Fisherow@usdoj.gov]
From: Brooks, Phillip
Sent: Thur 9/17/2015 12:55:38 AM
Subject: Fwd: VW PR and Rollout

Ex. 5

Ex. 5

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 16, 2015 at 8:36:40 PM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Grundler, Christopher" <grundler.christopher@epa.gov>, "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>, "Senn, John" <Senn.John@epa.gov>
Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: RE: VW PR and Rollout

Ex. 5

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Non-Responsive

****

From: McCabe, Janet
Sent: Wednesday, September 16, 2015 7:18 PM
To: Millett, John; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: RE: VW PR and Rollout

Thanks, John.

Are there any draft Q/As to look at yet?

From: Millett, John
Sent: Wednesday, September 16, 2015 4:49 PM
To: McCabe, Janet; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: VW PR and Rollout

Hi All – attached the latest draft PR and Rollout from OTAQ, reflecting the latest version of the NOV.

Based on a coordination call with OECA, OTAQ and CARB earlier today, we plan to provide the latest PR and rollout to CARB at 11 am tomorrow.

Two more coordination calls are planned for tomorrow at noon and 4pm.

Ex. 5

~~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: Non-Responsive
~~~~~~~~~~~~~~~~~

To: Alexander, David[Alexander.David@epa.gov]
From: Kaul, Meetu
Sent: Thur 9/17/2015 1:21:49 AM
Subject: FW: VW PR and Rollout
Internal QA doc_VW Defeat Device 9_16_15 jc_eb_bjb - clean.docx
ATT00001.htm

I have not looked at these yet but assume your work has been tied into this. If you have a chance to review and have any comments, let me/the group know.

Thanks David!

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Brooks, Phillip
Sent: Wednesday, September 16, 2015 8:44 PM
To: Giles-AA, Cynthia; Starfield, Lawrence; Kelley, Rosemarie
Cc: Werner, Jacqueline; Belser, Evan; Kaul, Meetu
Subject: Fwd: VW PR and Rollout

These just came in.

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 16, 2015 at 8:36:40 PM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Grundler, Christopher" <grundler.christopher@epa.gov>, "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>, "Senn, John" <Senn.John@epa.gov>
Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: RE: VW PR and Rollout

These have not been through the OECA part of our team yet, but a review now for missing questions and general tone etc. would be very welcome.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: McCabe, Janet
Sent: Wednesday, September 16, 2015 7:18 PM
To: Millett, John; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: RE: VW PR and Rollout

Thanks, John.

Are there any draft Q/As to look at yet?

From: Millett, John
Sent: Wednesday, September 16, 2015 4:49 PM
To: McCabe, Janet; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: VW PR and Rollout

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Two more coordination calls are planned for tomorrow at noon and 4pm.

CARB expressed an interest in participating in the press call on Friday, but we need to discuss that here and with them further. Their current plan is to also issue what they call an "in-use enforcement" letter" that they would make public and be prepared to answer questions on.

~~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822
~~~~~~~~~~~~~~~~~

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Kataoka, Mark
Sent: Thur 9/17/2015 1:47:52 AM
Subject: Automatic reply: VW NOV

I am out of the office on leave until Mon Sep 21.
Please note you will receive this notice only once during my absence

If this is an urgent matter, you may contact the following:

For air toxics matters, Sonja Rodman at 202-564-4079
For mobile source matters, David Orlin at 202-564-1222

For PSD matters, Brian Doster at 202-564-1932

For Regional Haze matters, Kristi Smith at 202-564-3068

For Title V permit matters, Michael Lee at 202-564-5486
Or ARLO main number at 202-564-7606

Or you may try to reach me at Ex. 6

To: Pickell, Casey[Pickell.Casey@epa.gov]; Levy, Trey[Levy.Trey@epa.gov]
From: Kaul, Meetu
Sent: Thur 9/17/2015 1:58:07 AM
Subject: VW - G drive documents

Hey Casey and Trey,

To the extent you are saving documents for VW on the G drive, please try to keep them organized in folders – that directory is going to get huge and unwieldy really fast.

To the extent you are doing general research or don't yet have a good "place"/Folder for your work, just keep it in a subfolder identified by your name.

Thanks very much for all your help!

-mk

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
From: Werner, Jacqueline
Sent: Thur 9/17/2015 2:06:00 AM
Subject: Fwd: VW PR and Rollout
ATT00001.htm

FYI

Sent from my iPhone
Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

Begin forwarded message:

From: "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Date: September 16, 2015 at 8:43:32 PM EDT
To: "Giles-AA, Cynthia" <Giles-AA.Cynthia@epa.gov>, "Starfield, Lawrence" <Starfield.Lawrence@epa.gov>, "Kelley, Rosemarie" <Kelley.Rosemarie@epa.gov>
Cc: "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>, "Belser, Evan" <Belser.Evan@epa.gov>, "Kaul, Meetu" <Kaul.Meetu@epa.gov>
Subject: Fwd: VW PR and Rollout

These just came in.

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 16, 2015 at 8:36:40 PM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Grundler, Christopher" <grundler.christopher@epa.gov>, "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>, "Senn, John" <Senn.John@epa.gov>
Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: RE: VW PR and Rollout

These have not been through the OECA part of our team yet, but a review now for missing questions and general tone etc. would be very welcome.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: McCabe, Janet
Sent: Wednesday, September 16, 2015 7:18 PM
To: Millett, John; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John

Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: RE: VW PR and Rollout

Thanks, John.

Are there any draft Q/As to look at yet?

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Sent: Wednesday, September 16, 2015 4:49 PM
To: McCabe, Janet; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: VW PR and Rollout

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~~~~~~~~~~~~~~~~~

John Millett
~~~~~~~~~~~~~~~~~

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
Cc: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Alexander, David[Alexander.David@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Thur 9/17/2015 2:50:11 AM
Subject: RE: VW PR and Rollout
Internal QA doc_VW Defeat Device 9_16_15 jc_eb_bjb_MK.docx

Just a few edits for accuracy/to match to NOV.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
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Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: RE: VW PR and Rollout

Ex. 5

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

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****

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Sent: Wednesday, September 16, 2015 7:18 PM
To: Millett, John; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
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Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
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Ex. 7

Ex. 7

~~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822
~~~~~~~~~~~~~~~~~

To: Ex. 6
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Thur 9/17/2015 3:05:55 AM
Subject: RE: VW Corporate Structure

Thank you, Ex. 6

DOJ sent over some similar information that they had their librarian search. I will send to you and ask that you look thru the information they've compiled in order to add on/revise this summary.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Ex. 6
Sent: Wednesday, September 16, 2015 2:55 PM
To: Kaul, Meetu
Cc: Belser, Evan
Subject: VW Corporate Structure

Meetu,

Attached is an updated corporate structure chart and a simpler chart showing the setup I found online. In the VW America section, Mr. Geanacopoulos's title is included. I'm about to go to class for the day but I'll be back tomorrow at 9 if you need anything else for this.

Thanks,

Ex. 6

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF KENTUCKY
AT PADUCAH

FILED ELECTRONICALLY

CLINT HISER and)
KAREN HISER, Individually and as)
Parents and next friends of)
SHELBY HISER)
)
PLAINTIFFS)
)
v.) CASE NO. 5:14-CV-00170-TBR
)
VOLKSWAGEN GROUP OF AMERICA, INC., et al.)
)
DEFENDANTS)

* * * * * * *

RULE 7.1 CORPORATE DISCLOSURE STATEMENT OF DEFENDANT VOLKSWAGEN GROUP OF AMERICA, INC.

Pursuant to Rule 7.1 of the Federal Rules of Civil Procedure, Defendant Volkswagen Group of America, Inc., ("VWGoA") former ly known as Volkswagen of America, Inc., states that it is a wholly-owned sub sidiary of Volkswagen AG, and none of its shares are publicly traded.

Respectfully submitted,

/s/ David T. Schaefer
David T. Schaefer

Anne K. Guillory
DINSMORE & SHOHL LLP
101 South Fifth Street, Suite 2500
Louisville, Kentucky 40202
Phone: (502) 581-8000
Fax: (502) 581-8111

david.schaefer@dinsmore.com
anne.guillory@dinsmore.com
Counsel for Defendant,
Volkswagen Group of America, Inc.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing was this 23rd d ay of September, 2014 electronically filed through the CM/ECF system and a copy served via the Court's CM/ECF system upon:

Curtis J. Hamilton, III
Curt Hamilton Law Office PLLC
110 North Main Street
P.O. Box 2
Henderson, KY 42419-0002
Co-counsel for Plaintiffs

David V. Scott
4965 U.S. Hwy. 42, Suite 1000
Louisville, KY 40222
Co-counsel for Plaintiffs

/s/ David T. Schaefer
Counsel for Defendant

7275332v1

VW FOIA, EPA 06/20/2017 2017-FFP_023779

UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF MASSACHUSETTS

VOLKSWAGEN OF AMERICA, INC., AN OPERATING UNIT OF VOLKSWAGEN GROUP OF AMERICA, INC.,

Plaintiff

v.

U.S. AUTO GROUP OF MASSACHUSETTS,

Defendant

Civil Action
No. 1:15-CV-10636-RGS

CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Civil Procedure 7.1 and Local Rule 7.3(A), the Plaintiff, Volkswagen of America, Inc., an operating unit of Volkswagen Group of America, Inc. (the "Plaintiff") hereby certifies that the following are parents, subsidiaries and/or affiliates of said party that have issued shares or debt securities to the public and/or are publicly held corporations owning ten (10%) percent or more of its stock: Volkswagen AG, which is a publicly traded German company. Counsel further notes that Porsche Automobil Holding SE is a publicly traded German company that holds an interest in Volkswagen AG that is greater than ten (10%) percent.

VOLKSWAGEN OF AMERICA, INC.,

By Its Attorneys,
RIEMER & BRAUNSTEIN LLP

Date: March 5, 2015

/s/ Joseph R. Valle, Jr.
Joseph R. Valle, Jr., BBO #550291
Riemer & Braunstein LLP
Three Center Plaza
Boston, Massachusetts 02108
(617) 880-3454
jvalle@riemerlaw.com

1713642.1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 14-20107-CIV-MORENO-O'SULLIVAN

SANDRA SPEIER-ROCHE,
individually, and on behalf of a
class of similarly situated individuals,

Plaintiff,

vs.

VOLKSWAGEN GROUP OF
AMERICA, INC. d/b/a AUDI OF
AMERICA, INC., AUDI AG and
VOLKSWAGEN AG,

Defendants.
_____/

DEFENDANT, VOLKSWAGEN GROUP OF AMERICA, INC.'S CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Civil Procedure 7.1(a), Defendant, VOLKSW AGEN GROUP OF AMERICA, INC. ("VWGoA"), hereby discloses the following:

One hundred percent (100%) of the common stock of VWGoA is owned by Volks wagen AG, a publicly traded German corporation.

Dated: April 7, 2014

Respectfully submitted,

s/ Michael D. Begey

LARRY M. ROTH, ESQUIRE
Florida Bar No. 0208116
Email: lroth@rumberger.com
MICHAEL D. BEGEY, ESQUIRE
Florida Bar No. 0120928
Email: mbegey@rumberger.com
RUMBERGER, KIRK & CALDWELL
A Professional Association
Lincoln Plaza, Suite 1400
300 South Orange Avenue (32801)
Post Office Box 1873
Orlando, Florida 32802-1873

Telephone: (407) 872-7300
Telecopier: (407) 841-2133

- *Of Counsel* -
JEFFREY L. CHASE, ESQUIRE
Email: jchase@herzfeld-rubin.com
Pro Hac Vice Admission
MICHAEL B. GALLUB, ESQUIRE
Email: mgallub@herzfeld-rubin.com
Pro Hac Vice Admission
HERZFELD & RUBIN, P.C.
125 Broad Street
New York, New York 10004
Telephone: (212) 471-8500
Telecopier: (212) 344-3333

Attorneys for Defendant,
Volkswagen Group of America, Inc.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foreg oing was served by electronically filing with the Clerk of the Court using CM/ECF on April 7, 2014, on all counsel or parties of record on the Service List below.

s/ Michael D. Begey

LARRY M. ROTH, ESQUIRE
Florida Bar No. 0208116
Email: lroth@rumberger.com
MICHAEL D. BEGEY, ESQUIRE
Florida Bar No. 0120928
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- *Of Counsel* -
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VW FOIA, EPA 06/20/2017 2017-FFP_023782

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Volkswagen Group of America, Inc.

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103 Eisenhower Parkway
Roseland, NJ 07068
Attorneys for Plaintiff

To: Alexander, David[Alexander.David@epa.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Werner, Jacqueline
Sent: Thur 9/17/2015 10:35:38 AM
Subject: Re: VW PR and Rollout

Thanks David!
jj

Sent from my iPhone
Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

On Sep 16, 2015, at 10:51 PM, Alexander, David <Alexander.David@epa.gov> wrote:

Meetu and all,

Ex. 5

David

David Alexander, Attorney

Air Enforcement Division

United States Environmental Protection Agency

1200 Pennsylvania Ave. NW, Rm. WJC South 1111-B

Washington, DC 20044

telephone (202) 564-2109

From: Kaul, Meetu
Sent: Wednesday, September 16, 2015 9:21 PM
To: Alexander, David
Subject: FW: VW PR and Rollout

I have not looked at these yet but assume your work has been tied into this. If you have a chance to review and have any comments, let me/the group know.

Thanks David!

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Brooks, Phillip
Sent: Wednesday, September 16, 2015 8:44 PM
To: Giles-AA, Cynthia; Starfield, Lawrence; Kelley, Rosemarie
Cc: Werner, Jacqueline; Belser, Evan; Kaul, Meetu
Subject: Fwd: VW PR and Rollout

These just came in.

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 16, 2015 at 8:36:40 PM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Grundler, Christopher" <grundler.christopher@epa.gov>, "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>, "Senn, John" <Senn.John@epa.gov>
Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: RE: VW PR and Rollout

Ex. 5

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: McCabe, Janet
Sent: Wednesday, September 16, 2015 7:18 PM
To: Millett, John; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: RE: VW PR and Rollout

Thanks, John.

Are there any draft Q/As to look at yet?

From: Millett, John
Sent: Wednesday, September 16, 2015 4:49 PM
To: McCabe, Janet; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: VW PR and Rollout

Hi All – attached the latest draft PR and Rollout from OTAQ, reflecting the latest version of the NOV.

Based on a coordination call with OECA, OTAQ and CARB earlier today, we plan to provide the latest PR and rollout to CARB at 11 am tomorrow.

Two more coordination calls are planned for tomorrow at noon and 4pm.

Ex. 7

~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

<VW Defeat Device 9_16_15 jc_eb_bjb dEa.docx>
~~~~~~~~~~~~~~~~

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Stewart, Gwen
Sent: Thur 9/17/2015 11:11:11 AM
Subject: FW: Request to speak with Mr. Grundler

Telephone Message.

Gwen Stewart

Office of Transportation and Air Quality

202 564-1682 – Telephone

202 564-1686 – Fax Number

Stewart.gwen@epa.gov

From: Ex. 7
Sent: Wednesday, September 16, 2015 5:20 PM
To: Stewart, Gwen
Subject: RE: Request to speak with Mr. Grundler

Hi Gwen, I just missed a call from Chris. My assistant couldn't find me before he hung up. I am afraid we kept him on hold too long. I left a voicemail on his telephone. Sorry about the difficulty. I hope he will try me back. Thanks for your help.

Best regards,

Ex. 7

From: Stewart, Gwen [mailto:Stewart.Gwen@epa.gov]
Sent: Wednesday, September 16, 2015 12:51 PM
To: Ex. 7
Subject: RE: Request to speak with Mr. Grundler

Good Afternoon:

Thank you for the below e-mail message.

Christopher is at this moment boarding a flight.

I have passed on the information to him.

Thank you

Gwen Stewart

Office of Transportation and Air Quality

202 564-1682 – Telephone

202 564-1686 – Fax Number

Stewart.gwen@epa.gov

From: Ex. 7
Sent: Wednesday, September 16, 2015 11:46 AM
To: Stewart, Gwen
Subject: Request to speak with Mr. Grundler

Dear Ms. Stewart,

I called today in an effort to reach Mr. Grundler. I would like to speak with him as soon as possible about a matter he has discussed with my colleague Ex. 7 I would appreciate it if you would help me get in touch with Mr. Grundler. I can be reached at my office number below, or my personal cell phone, Ex. 6 If there is a time you would suggest I place a call to him, please let me know.

Thank you and best regards,

Ex. 7

Ex. 7

Ex. 7

To: Millett, John[Millett.John@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: McCabe, Janet
Sent: Thur 9/17/2015 11:20:38 AM
Subject: Re: For the press release

Yes please, do some reining.

I'm talking to Mary at 11:30, and I can set our tone for the release, which she will hopefully agree with and be able to convey to her staff.

Sent from my iPhone

On Sep 17, 2015, at 7:01 AM, Millett, John <Millett.John@epa.gov> wrote:

Ex. 5

John Millett
202.510.1822

Begin forwarded message:

From: Ex. 7
Date: September 17, 2015 at 1:05:56 AM EDT
To: "Millett.john@Epa.gov" <Millett.john@Epa.gov>
Cc: Ex. 7
Subject: For the press release

John,
A couple of things:
First, ARB is very interested in both bringing the existing cars into compliance, and pursuing penalties for VW as warranted. So we're hopeful you can put those dual goals into the release.

Also, in terms of giving ARB recognition for uncovering this violation, I am providing you with a chronology narrative that helps tell the story. I think this will help provide more substance to the release: and some newsy fodder for the reporters to help fill out their stories given that there are not a lot of facts we will be able to give out.

As I mentioned, I'll call you tomorrow at around 9:30 your time.
Cheers
Stanley

Chronology Narrative:

"In early 2014 ARB contacted Volkswagen after staff was asked by the International Council on Clean Transportation (ICCT) to do tests to verify findings of a study which raised questions about discrepancies between oxides of nitrogen (NOX) emissions of diesel engine cars under official test cycles compared to NOX emissions under actual driving conditions.

Later that year, ARB began a test program aimed at investigating the concerns raised by ICCT. After conducting extensive onboard diagnostic evaluations, laboratory testing and onroad emissions testing of VW diesel vehicles of concern, ARB determined that the emissions of NOx increased 7 to 10 fold when being operated outside of compliance cycles (that is, the standard testing procedures).Throughout the testing and for several months, ARB proposed questions to VW and conducted a series of meetings in an effort to determine why under certain conditions the vehicle's oxides of nitrogen emissions increased significantly.

In early July, 2015 ARB shared the specific test results with VW and challenged their previous answers. Shortly after this meeting, ARB contacted the United States Environmental Protection Agency (EPA) to share its concerns based on its testing and strongly encouraged VW to bring the EPA into the discussions. After continued probing over the next two months, in late August VW staff admitted verbally that they used a 'defeat' routine in the software that controls the engine. This defeat software sensed if the car was not being driven under test conditions on a laboratory dynamometer, and if so, switched the engine to an operation mode that increased emissions of NOx. While VW gave reasons for the defeat device at the time, the final reasons are still being explored with VW.

ARB then presented a range of questions to VW for written responses, and in early September VW provided responses admitting they had installed the defeat software since the 2009 model year diesel car imported into the United States. They also explained how the software detected whether the car was in a test mode, or engaged in on-the-road driving. One indicator, for example, was whether the steering wheel was being moved; on the dynamometer during testing the steering wheel is immobilized.

At this time, VW is cooperating with ARB to rectify the issue.

<2015-09-16 Draft VW chronology-Final Clean Draft.docx>

To: Bunker, Byron[bunker.byron@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Cohen, Janet
Sent: Thur 9/17/2015 11:58:27 AM
Subject: resend
Internal QA doc_VW Defeat Device 9_16_15 jc_eb_bjb - clean jm v2_9_17_jc.docx

Hope this one is ok

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Giles-AA, Cynthia
Sent: Thur 9/17/2015 12:24:08 PM
Subject: RE: ARB DRAFT In-Use Compliance Letter to VW

sure

From: Brooks, Phillip
Sent: Thursday, September 17, 2015 8:09 AM
To: Giles-AA, Cynthia
Subject: RE: ARB DRAFT In-Use Compliance Letter to VW

I can. I am downstairs. I will bring Evan with me if that is ok.

From: Giles-AA, Cynthia
Sent: Thursday, September 17, 2015 8:08 AM
To: Brooks, Phillip
Subject: RE: ARB DRAFT In-Use Compliance Letter to VW

Ok. Want to come over 8:30?

Sent from my Windows Phone

From: Brooks, Phillip
Sent: 9/17/2015 5:34 AM
To: Giles-AA, Cynthia; Starfield, Lawrence; Kelley, Rosemarie
Subject: Fwd: ARB DRAFT In-Use Compliance Letter to VW

Ex. 5, 7

Sent from my iPhone

Begin forwarded message:

From: "Sax, Todd@ARB" <todd.sax@arb.ca.gov>
Date: September 17, 2015 at 2:09:28 AM EDT
To: "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Werner.Jacqueline@epa.gov" <Werner.Jacqueline@epa.gov>, "Belser.Evan@epa.gov" <Belser.Evan@epa.gov>, "bunker.byron@epa.gov" <bunker.byron@epa.gov>
Cc: "Peter, Ellen M. @ARB" <ellen.peter@arb.ca.gov>, "Hebert, Annette@ARB" <annette.hebert@arb.ca.gov>, "Fuentes, Mark@ARB" <mfuentes@arb.ca.gov>, "Bevan, Analisa@ARB" <analisa.bevan@arb.ca.gov>, "Livingston, Aron@ARB" <aron.livingston@arb.ca.gov>, "Binder, Gregory@ARB" <gregory.binder@arb.ca.gov>, "Lourenco, Jackie@ARB" <Jackie.Lourenco@arb.ca.gov>, "Lemieux, Sharon@ARB" <sharon.lemieux@arb.ca.gov>, "Regenfuss, Mike@ARB" <michael.regenfuss@arb.ca.gov>, "Montes, Thomas@ARB" <thomas.montes@arb.ca.gov>, "Young, Stanley@ARB" <stanley.young@arb.ca.gov>
Subject: ARB DRAFT In-Use Compliance Letter to VW

Phil et al.,

Ex. 5, 7

Regards,

Todd Sax, D.Env.

Chief, Enforcement Division

California Air Resources Board

(916) 229-0884 (direct office)

(916) 996-6109 (cell)

todd.sax@arb.ca.gov

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
From: Alexander, David
Sent: Thur 9/17/2015 2:22:23 PM
Subject: RE: VW PR and Rollout

Meetu,

Ex. 5

David

David E. Alexander, Attorney

WJC South Room 1111-B

OECA/Air Enforcement Division (2242-A)

(202) 564-2109

From: Kaul, Meetu
Sent: Thursday, September 17, 2015 10:01 AM
To: Alexander, David
Cc: Werner, Jacqueline; Belser, Evan
Subject: FW: VW PR and Rollout

David,

Ex. 5 and send to OTAQ including press folks.

Thanks

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Starfield, Lawrence
Sent: Thursday, September 17, 2015 9:31 AM
To: Brooks, Phillip; Giles-AA, Cynthia; Kelley, Rosemarie
Cc: Werner, Jacqueline; Belser, Evan; Kaul, Meetu
Subject: RE: VW PR and Rollout

Ex. 5

Larry
This message is CONFIDENTIAL, and may contain legally privileged information. If you are not the intended recipient, or believe you received this communication in error, please delete it immediately, do not copy, and notify the sender. Thank you.

From: Brooks, Phillip
Sent: Wednesday, September 16, 2015 8:44 PM
To: Giles-AA, Cynthia; Starfield, Lawrence; Kelley, Rosemarie
Cc: Werner, Jacqueline; Belser, Evan; Kaul, Meetu
Subject: Fwd: VW PR and Rollout

These just came in.

Sent from my iPhone

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 16, 2015 at 8:36:40 PM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Grundler, Christopher" <grundler.christopher@epa.gov>, "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>, "Senn, John" <Senn.John@epa.gov>
Cc: "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: RE: VW PR and Rollout

Ex. 5

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: McCabe, Janet
Sent: Wednesday, September 16, 2015 7:18 PM
To: Millett, John; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: RE: VW PR and Rollout

Thanks, John.

Are there any draft Q/As to look at yet?

From: Millett, John
Sent: Wednesday, September 16, 2015 4:49 PM
To: McCabe, Janet; Grundler, Christopher; Brooks, Phillip; Reynolds, Thomas; Conger, Nick; Senn, John
Cc: Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Cohen, Janet; Stewart, Lori
Subject: VW PR and Rollout

Hi All – attached the latest draft PR and Rollout from OTAQ, reflecting the latest version of the NOV.

Based on a coordination call with OECA, OTAQ and CARB earlier today, we plan to provide the latest PR and rollout to CARB at 11 am tomorrow.

Two more coordination calls are planned for tomorrow at noon and 4pm.

Ex. 7

~~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822
~~~~~~~~~~~~~~~~~

To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Conger, Nick[Conger.Nick@epa.gov]
From: Senn, John
Sent: Thur 9/17/2015 2:34:34 PM
Subject: For AED review: Edits to release
VW Defeat Device_PR_Rollout_9-17-15_OECAedits.docx

Ex. 5

Please let me know if you have any additional comments/edits…I would like to get a revised version back to OAR early this afternoon.

Thanks,

John

John Senn

Deputy Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

(202) 564-8996 - senn.john@epa.gov

https://twitter.com/EPAJustice

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Millett, John[Millett.John@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Kataoka, Mark[Kataoka.Mark@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Cohen, Janet
Sent: Thur 9/17/2015 3:02:19 PM
Subject: RE: VW materials to share with California at 11 am.
What should I expect if I own an affected Volkswagen diesel vehicle _clean early draft_jc_11am.docx

Here are some edits to the "what should I expect" document

From: Birgfeld, Erin
Sent: Thursday, September 17, 2015 10:37 AM
To: Cohen, Janet; Hengst, Benjamin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark; Conger, Nick; Senn, John
Subject: VW materials to share with California at 11 am.

Hi all,

We intend to share these docs with California at 11. Byron and Janet please take a look and send along. Thanks!

1. Press release (including chronology) / Tick-tock / Categories of who we are calling and when (all in one doc)
2. Q&A (redacted, shorter version)
3. Consumer fact sheet (still being vetted be we want to get your feedback)

<< File: What should I expect if I own an affected Volkswagen diesel vehicle _clean early draft.docx >>
<< File: Internal QA doc_VW Defeat Device 9_17_15_clean.docx >> << File: VW Defeat Device_PR_ Rollout 9_17_10 am .docx >>
-----Original Appointment-----
From: Cohen, Janet
Sent: Thursday, September 17, 2015 8:46 AM
To: Cohen, Janet; Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark
Subject: status update & rollout coordination
When: Thursday, September 17, 2015 9:30 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: Non-Responsive

Quick check in to review new developments, assess progress and confirm plans for rest of day. Please invite others as needed. Thanks. - j. -

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Millett, John[Millett.John@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Kataoka, Mark[Kataoka.Mark@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Cohen, Janet
Sent: Thur 9/17/2015 3:13:57 PM
Subject: RE: VW materials to share with California at 11 am.
Internal QA doc_VW Defeat Device 9_17_15_clean_jc_11am.docx

And a few tweaks to the Q/A document. Erin, please remove my comments as appropriate for the final version that goes to CARB. - j. -

---

From: Birgfeld, Erin
Sent: Thursday, September 17, 2015 10:37 AM
To: Cohen, Janet; Hengst, Benjamin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark; Conger, Nick; Senn, John
Subject: VW materials to share with California at 11 am.

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Where: **Non-Responsive**

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To: Cohen, Janet[cohen.janet@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Kataoka, Mark[Kataoka.Mark@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Millett, John
Sent: Thur 9/17/2015 3:16:48 PM
Subject: RE: VW materials to share with California at 11 am.

Ex. 5

~~~~~~~~~~~~~~~~

John Millett
Director, OAR Communications
Desk: 202-564-2903
Cell: 202-510-1822

From: Cohen, Janet
Sent: Thursday, September 17, 2015 11:02 AM
To: Birgfeld, Erin; Hengst, Benjamin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark; Conger, Nick; Senn, John
Subject: RE: VW materials to share with California at 11 am.

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<< File: What should I expect if I own an affected Volkswagen diesel vehicle _clean early draft_jc_11am.docx >>

From: Birgfeld, Erin
Sent: Thursday, September 17, 2015 10:37 AM
To: Cohen, Janet; Hengst, Benjamin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark; Conger, Nick; Senn, John
Subject: VW materials to share with California at 11 am.

Hi all,
~~~~~~~~~~~~~~~~

We intend to share these docs with California at 11. Byron and Janet please take a look and send along. Thanks!

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To: Cohen, Janet; Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark
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Where: Non-Responsive

Quick check in to review new developments, assess progress and confirm plans for rest of day. Please invite others as needed. Thanks. - j. -

To: Cohen, Janet[cohen.janet@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Kataoka, Mark[Kataoka.Mark@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Millett, John
Sent: Thur 9/17/2015 3:19:34 PM
Subject: RE: VW materials to share with California at 11 am.

Ex. 5 - I don't think Janet will care either way. Will run that by Janet in due course - in the meantime, till I can connect w/ Janet on that - **Ex. 5**

~~~~~~~~~~~~~~~~

John Millett
Director, OAR Communications
Desk: 202-564-2903
Cell: 202-510-1822

From: Cohen, Janet
Sent: Thursday, September 17, 2015 10:50 AM
To: Birgfeld, Erin; Hengst, Benjamin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark; Conger, Nick; Senn, John
Subject: RE: VW materials to share with California at 11 am.

Ex. 5

<< File: VW Defeat Device_PR_ Rollout 9_17_10 am_jc_10_45 .docx >>

From: Birgfeld, Erin
Sent: Thursday, September 17, 2015 10:37 AM
To: Cohen, Janet; Hengst, Benjamin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark; Conger, Nick; Senn, John
Subject: VW materials to share with California at 11 am.

Hi all,

We intend to share these docs with California at 11. Byron and Janet please take a look and send along. Thanks!
~~~~~~~~~~~~~~~~

1. Press release (including chronology) / Tick-tock / Categories of who we are calling and when (all in one doc)
2. Q&A (redacted, shorter version)
3. Consumer fact sheet (still being vetted be we want to get your feedback)

<< File: What should I expect if I own an affected Volkswagen diesel vehicle _clean early draft.docx >>
<< File: Internal QA doc_VW Defeat Device 9_17_15_clean.docx >> << File: VW Defeat Device_PR_ Rollout 9_17_10 am .docx >>
-----Original Appointment-----
From: Cohen, Janet
Sent: Thursday, September 17, 2015 8:46 AM
To: Cohen, Janet; Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark
Subject: status update & rollout coordination
When: Thursday, September 17, 2015 9:30 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: Non-Responsive

Quick check in to review new developments, assess progress and confirm plans for rest of day. Please invite others as needed. Thanks. - j. -

To: Cohen, Janet[cohen.janet@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Millett, John[Millett.John@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Kataoka, Mark[Kataoka.Mark@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]
From: Senn, John
Sent: Thur 9/17/2015 3:26:57 PM
Subject: RE: VW materials to share with California at 11 am.

FYI that I will circulate some edits in a bit that reflect input from Cynthia...I will send as soon as possible.

Thanks,
John

John Senn
Deputy Communications Director
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
(202) 564-8996 - senn.john@epa.gov
https://twitter.com/EPAJustice

From: Cohen, Janet
Sent: Thursday, September 17, 2015 11:14 AM
To: Birgfeld, Erin; Hengst, Benjamin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark; Conger, Nick; Senn, John
Subject: RE: VW materials to share with California at 11 am.

And a few tweaks to the Q/A document. Erin, please remove my comments as appropriate for the final version that goes to CARB. - j. -
<< File: Internal QA doc_VW Defeat Device 9_17_15_clean_jc_11am.docx >>

From: Birgfeld, Erin
Sent: Thursday, September 17, 2015 10:37 AM
To: Cohen, Janet; Hengst, Benjamin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark; Conger, Nick; Senn, John
Subject: VW materials to share with California at 11 am.

Hi all,

We intend to share these docs with California at 11. Byron and Janet please take a look and send along. Thanks!

1. Press release (including chronology) / Tick-tock / Categories of who we are calling and when (all in one doc)
2. Q&A (redacted, shorter version)
3. Consumer fact sheet (still being vetted be we want to get your feedback)

<< File: What should I expect if I own an affected Volkswagen diesel vehicle _clean early draft.docx >>
<< File: Internal QA doc_VW Defeat Device 9_17_15_clean.docx >> << File: VW Defeat Device_PR_ Rollout 9_17_10 am .docx >>
-----Original Appointment-----
From: Cohen, Janet
Sent: Thursday, September 17, 2015 8:46 AM
To: Cohen, Janet; Hengst, Benjamin; Birgfeld, Erin; Bunker, Byron; Wehrly, Linc; Millett, John; Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Kataoka, Mark
Subject: status update & rollout coordination
When: Thursday, September 17, 2015 9:30 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: Non-Responsive

Quick check in to review new developments, assess progress and confirm plans for rest of day. Please invite others as needed. Thanks. - j. -

To: Glodich, Jeffrey (J.M.)[jglodich@ford.com]; 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.org]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; 'Buller, Patrick'[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; 'david.woods@chrysler.com'[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; 'Jenny.Sigelko@vw.com'[Jenny.Sigelko@vw.com]; 'JNIKEUS@volvocars.com'[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; 'Suanne.Thomas@vw.com'[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; 'Vineet Mehta'[vineet@teslamotors.com]; Beggs, William S.[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]; Zhu, Jennifer (J.)[jzhu38@ford.com]
Cc: Nikeus, Jill (J.N.)[jill.nikeus@volvocars.com]; Frank Bohanan[fbohanan@mazdausa.com]; Tommy_Chang@ahm.honda.com[Tommy_Chang@ahm.honda.com]
From: Duoba, Michael J.
Sent: Thur 9/17/2015 4:25:37 PM
Subject: RE: SAE J1634 LDVP Committee Meeting
Duoba-A More Accurate RAF-17SEP2015.pptx

Hi all,

Does anybody think this idea has merit?

I have not run it through our test data yet, but it is something that I thought about very recently.

Thanks

- Mike Duoba

Argonne National Lab

From: Glodich, Jeffrey (J.M.) [mailto:jglodich@ford.com]
Sent: Wednesday, September 16, 2015 7:46 AM
To: 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.) <tbeiers1@ford.com>; 'Berg, Olle ()' <olle.berg@volvocars.com>; "Beth Perry <eperry@sae.org>" <BethPerry <eperry@sae.org>; 'Bob Maxwell' <remaxwell@comcast.net>; brian.mace@horiba.com; 'Buller, Patrick' <patrick.buller@volvocars.com>; 'Carl Paulina' <Paulina.Carl@epamail.epa.gov>; Chris Nevers <CNevers@autoalliance.org>; Christopher J Twarog <christopher.twarog@gm.com>; 'david.woods@chrysler.com' <david.woods@chrysler.com>; 'Dennis Pawlak' <Dennis.Pawlak@na.mitsubishi-motors.com>; 'Douglas Reid' <Douglas.Reid@na.mitsubishi-motors.com>; Dr. Robert Otto Rasmussen, PE <Robotto@TheTranstecGroup.com>; Duoba, Michael J. <mduoba@anl.gov>; guanghui.cai@gm.com; 'Jeff Foor' <jdf14@chrysler.com>; 'Jenny.Sigelko@vw.com' <Jenny.Sigelko@vw.com>; 'JNIKEUS@volvocars.com' <JNIKEUS@volvocars.com>; 'Keith Thompson' <Keith.Thompson@bepco.com>; kyle.bedsole@gm.com; 'Mahmoud Yassine' <mky@chrysler.com>; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com> <michel.mahrous@fcagroup.com>; 'Marc Belzile' <marc.a.belzile@tc.gc.ca>; 'mark paxton' <mpaxton@ganassi.com>; Mccarthy, Chris (C.) <CMCCAR61@ford.com>; 'Meyer, Norm' <norm.meyer@tc.gc.ca>; mike.timmerman@horiba.com; Okawa, Naoyasu (N.) <okawa.n@mazda.co.jp>; Peabody, Jason (J.A.) <jpeabod6@ford.com>; 'Peter Z. Janosi' <peter.janosi@roush.com>; 'RMiller@hatci.com'; 'Roxanne Loeffler' <rloeffler@sae.org>; 'Schlueter, Hannah (EASZ/1)' <hannah.schlueter@volkswagen.de>; sconrad@hatci.com <sconrad@hatci.com>; 'snyder.jim@epa.gov'; Steve Karamihas <stevemk@umich.edu>; steve.baldus@gm.com; 'Suanne.Thomas@vw.com' <Suanne.Thomas@vw.com>; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; 'Vineet Mehta' <vineet@teslamotors.com>; Beggs, William S. <william.beggs@gm.com>; 'William Ott' <Ott.William@epamail.epa.gov>; william.meschievitz@tema.toyota.com; Wright, DavidA <Wright.DavidA@epa.gov>; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.) <nyuhase@ford.com>; Zhu, Jennifer (J.) <jzhu38@ford.com>
Cc: Nikeus, Jill (J.N.) <jill.nikeus@volvocars.com>; Frank Bohanan <fbohanan@mazdausa.com>; Tommy_Chang@ahm.honda.com
Subject: RE: SAE J1634 LDVP Committee Meeting

All,

Just a reminder that this is the last meeting before we bring J1634 to ballot, so please be prepared to discuss any comments/concerns.

Thanks,

Jeff

-----Original Appointment-----

From: Glodich, Jeffrey (J.M.)
Sent: Monday, August 31, 2015 8:41 AM
To: Glodich, Jeffrey (J.M.); 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; Beth Perry <eperry@sae.org>; 'Bob Maxwell'; brian.mace@horiba.com; 'Buller, Patrick'; 'Carl Paulina'; Chris Nevers; Christopher J Twarog ; 'david.woods@chrysler.com'; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; guanghui.cai@gm.com; 'Jeff Foor'; 'Jenny.Sigelko@vw.com'; 'JNIKEUS@volvocars.com'; 'Keith Thompson'; kyle.bedsole@gm.com; 'Mahmoud Yassine'; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z. Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)'; sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com; 'Suanne.Thomas@vw.com'; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; 'Vineet Mehta'; William Beggs <william.beggs@gm.com>; 'William Ott'; william.meschievitz@tema.toyota.com; Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.); Zhu, Jennifer (J.)
Cc: Nikeus, Jill (J.N.); Frank Bohanan; Tommy_Chang@ahm.honda.com
Subject: SAE J1634 LDVP Committee Meeting
When: Thursday, September 17, 2015 1:00 PM-3:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Toyota, Ann Arbor

Purpose: Agree on final updates before 1st level balloting.

SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.

Call in number 888-270-9936

Access code 8382416

Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>

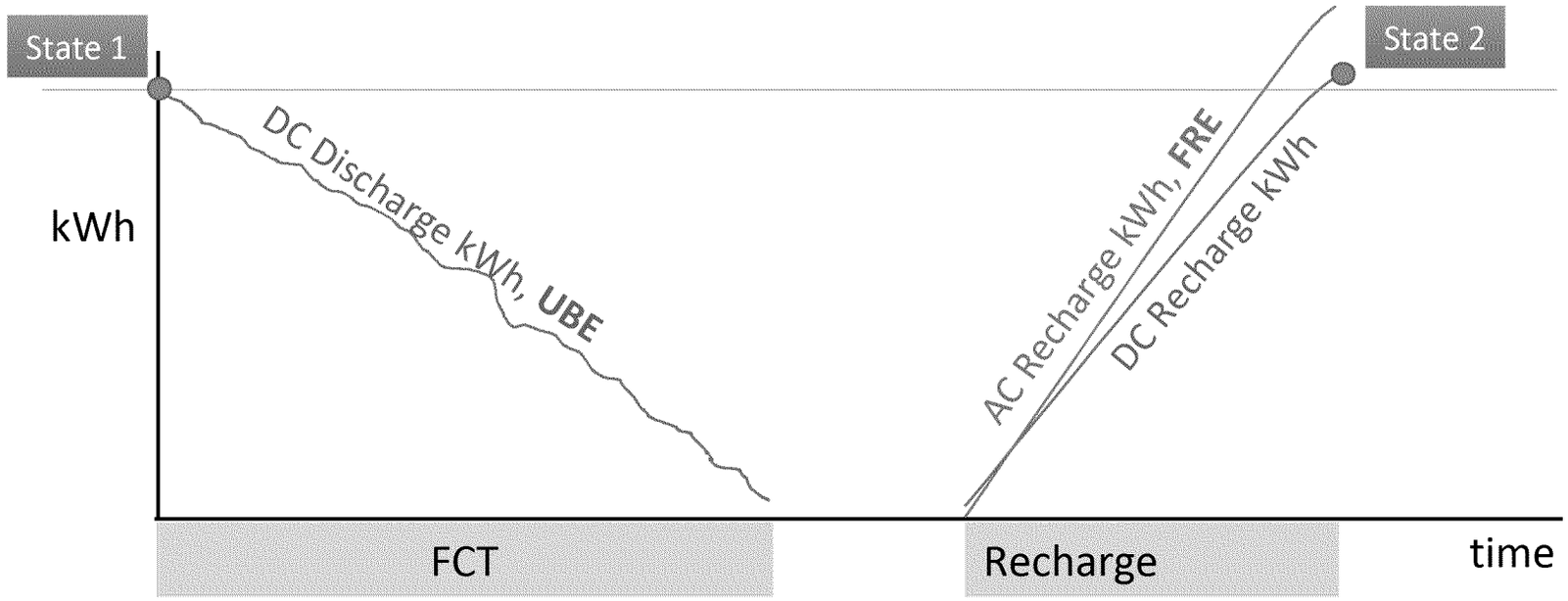
meeting id 888-270-9936

access code 8382416

A More Accurate RAF

M. Duoba

RAF = FRE / UBE → *RAF = FRE*(1/CR) / UBE*



- RAF is used when assigning AC Wh consumption to individual cycles based upon discharged DC Wh
- RAF is accurate only if State 1 is equal to State 2
- CR = C_C / C_D >= 0.97 tells us if the two state are close, but can we be more precise in the calculation of RAF?
- Can a "SOC Correction" be applied to the FRE based upon the ratio of battery Ah out and Ah in?
- **RAF = FRE*(1/CR) / UBE**
- For example, a CR of 0.97 means that State 2 fell short of State 1, FRE must be increased before the RAF is calculated

To: Ex. 7
From: Wehrly, Linc
Sent: Thur 9/17/2015 4:55:56 PM
Subject: FW: CARB-EPA-VW Diesel Conf Call
CARB-EPA-VW Diesel Conf Call.ics

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

16011104T020000

PRODID
-//Microsoft Corporation//Outlook 15.0 MIMEDIR//EN

Version
2.0

METHOD
REQUEST

X-MS-OLK-FORCEINSPECTOROPEN
TRUE

TZID
Eastern Standard Time

Start Date/Time
16011104T020000

Recurrence Rule
FREQ=YEARLY;BYDAY=1SU;BYMONTH=11

TZOFFSETFROM
-0400

TZOFFSETTO
-0500

16010311T020000

Start Date/Time
16010311T020000

Recurrence Rule
FREQ=YEARLY;BYDAY=2SU;BYMONTH=3

TZOFFSETFROM
-0500

TZOFFSETTO
-0400

CARB-EPA-VW Diesel Conf Call
Conf Call
20150917T130000

Attendee mailto:bunker.byron@epa.gov
RSVP TRUE

Attendee mailto:wehrly.linc@epa.gov
RSVP TRUE

Attendee mailto:Snyder.Jim@epa.gov
RSVP TRUE

Attendee
RSVP

Attendee
RSVP

Attendee
RSVP

Attendee
RSVP

Attendee
RSVP TRUE

Attendee
RSVP

Attendee
RSVP

Attendee
RSVP

Ex. 7

Ex. 7

Categories
PUBLIC

CREATED
20150917T165454Z

Description
Good Morning,
Please see below for dial-in information. Con f ID is at the bottom.
Thanks

Ex. 7

EPA:
Byron Bunker
L inc Wehrly

Jim Snyder
CARB:
Ex. 7

....
--> Join Skype Meeting
This is an online meet ing for Skype for Business, the professional meetings and communications app formerly known as Lync. Join by phone
+1 Ex. 7 (Auburn Hills) English (United States)
+1 (Auburn Hill s) English (United States)
+1 (Auburn Hil ls) English (United States)
+1 (Auburn Hi lls) English (United States)
Find a local number

Co nference ID: Non-Responsive
Forgot your dial-in PIN? |Help

[!OC([1033])!] \n..... .....

End Date/Time
20150917T150000

DTSTAMP
20150916T133602Z

Start Date/Time
20150917T130000

Last Modified
20150917T165454Z

Location
Conf Call

ORGANIZER (Ex. 7
Ex. 7

Priority
5

Sequence Number
0

Summary
CARB-EPA-VW Diesel Conf Call

Time Transparency
OPAQUE

UID

040000008200E00074C5B7101A82E00800000000006C3ADC5FF0D001000000000000000
0100000002C82D5C5C226D8408D821245D1CBC7BE

X-ALT-DESC (FMTTYPE=text/html)

Ex. 7

Ex. 7

X-MICROSOFT-CDO-BUSYSTATUS
BUSY

X-MICROSOFT-CDO-IMPORTANCE
1

X-MICROSOFT-CDO-INTENDEDSTATUS
BUSY

X-MICROSOFT-DISALLOW-COUNTER
FALSE

To: Ex. 7 @vw.com]
From: Bunker, Byron
Sent: Thur 9/17/2015 6:02:17 PM
Subject: Can you give me a call as soon as practical?

Thanks. Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Bunker, Byron
Sent: Thur 9/17/2015 6:12:14 PM
Subject: Chronology -

CARB and EPA were alerted to emissions problems with these vehicles when West Virginia University (WVU) and the International Counsel on Clean Transportation (ICCT) published results in May 2014 showing significantly higher in-use emissions from two light duty diesel vehicles (a diesel Jetta and diesel Passat). Over the year since the publication of the WVU and ICCT report, Volkswagen continually assured CARB and EPA that the increased emissions could be attributed to technical issues and unexpected in-use conditions. CARB's Arie Jan Haagen-Smit Laboratory in coordination with EPA conducted follow on testing of these vehicles both in the laboratory and during normal onroad operation in an effort to pinpoint the exact technical nature of the poor performance and the reasons that the vehicle's onboard diagnostics system wasn't detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. Only after it became clear that CARB and EPA would not approve Volkswagen's 2016 model year diesel vehicles until the anomalous emissions documented by CARB were explained did Volkswagen reveal the presence of a sophisticated software algorithm that detected when the vehicle was undergoing emissions testing. The software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Ex. 7 @vw.com]
From: Brooks, Phillip
Sent: Thur 9/17/2015 6:33:33 PM
Subject: Providing conference line information

Just to be sure I gave you the correct information: the call tomorrow at 9:00am will be on a conference line at Non-Responsive

If you have questions, or need assistance, please call.

Philip A Brooks

Director, Air Enforcement Division

OCE/OECA

U.S. Environmental Protection Agency

(202) 564-0652

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Ex. 7 (EEO)
Sent: Thur 9/17/2015 6:41:34 PM
Subject: RE: Providing conference line information

Hello Phil,

Thank you for the follow-up email. I've contacted David Geanacopoulos and he will check his schedule and get back to me today.

Talk to you tomorrow,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America

Ex. 7

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Thursday, September 17, 2015 2:34 PM
To: Ex. 7 (EEO)
Subject: Providing conference line information

Just to be sure I gave you the correct information: the call tomorrow at 9:00am will be on a conference line at Non-Responsive The Conference Code is Non-Responsive

If you have questions, or need assistance, please call.

Philip A Brooks

Director, Air Enforcement Division

OCE/OECA

U.S. Environmental Protection Agency

(202) 564-0652

To: Ex. 7 @vw.com]
From: Brooks, Phillip
Sent: Thur 9/17/2015 6:44:15 PM
Subject: RE: Providing conference line information

Thank you. Please note that this is a call that Mr. Geanacopolus would probably want to make a priority.

From: Ex. 7 @vw.com]
Sent: Thursday, September 17, 2015 2:42 PM
To: Brooks, Phillip
Subject: RE: Providing conference line information

Hello Phil,

Thank you for the follow-up email. I've contacted David Geanacopoulos and he will check his schedule and get back to me today.

Talk to you tomorrow,

Ex. 7

Ex. 7

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Thursday, September 17, 2015 2:34 PM
To: Ex. 7
Subject: Providing conference line information

Just to be sure I gave you the correct information: the call tomorrow at 9:00am will be on a conference line at Non-Responsive

If you have questions, or need assistance, please call.

Philip A Brooks

Director, Air Enforcement Division

OCE/OECA

U.S. Environmental Protection Agency

(202) 564-0652

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Millett, John[Millett.John@epa.gov]
Cc: Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Cohen, Janet[cohen.janet@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Cook, Leila[cook.leila@epa.gov]
From: Bunker, Byron
Sent: Thur 9/17/2015 7:22:07 PM
Subject: WVU Report
WVU_LDDV_in-use_ICCT_Report_Final_may2014.pdf

You will surely be asked – here is the WVU report.

http://www.theicct.org/sites/default/files/publications/WVU_LDDV_in-use_ICCT_Report_Final_may2014.pdf

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Thur 9/17/2015 7:30:57 PM
Subject: RE: VW - Revised NOV now with Chron and further DOJ edits

Ex. 5

From: Kaul, Meetu
Sent: Thursday, September 17, 2015 3:25 PM
To: Ex. 7 (ENRD); Engel, Bethany (ENRD); Allen, Leslie (ENRD); karen.dworkin@usdoj.gov; Benjamin.fisherow@usdoj.gov
Cc: Belser, Evan; Werner, Jacqueline
Subject: FW: VW - Revised NOV now with Chron and further DOJ edits
Importance: High

Ex. 5

Thank you

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kaul, Meetu
Sent: Thursday, September 17, 2015 3:22 PM
To: Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Orehowsky, Gregory; Bunker, Byron; Wehrly, Linc; Giles-AA, Cynthia; Starfield, Lawrence; Conger, Nick; Senn, John; Kelley, Rosemarie
Subject: VW - Revised NOV now with Chron and further DOJ edits
Importance: High

Ex. 5

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Thur 9/17/2015 7:30:59 PM
Subject: P.M. NEWSCAST: FCA-UAW deal shifts car assembly to Mexico | GM's criminal penalty | Toyota-BMW sports talk | Maserati to miss sales target | Another Audi EV coming

September 17, 2015

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Toyota-BMW sports talk »

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Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Thur 9/17/2015 7:31:15 PM
Subject: P.M. NEWSCAST: FCA-UAW deal shifts car assembly to Mexico | GM's criminal penalty | Toyota-BMW sports talk | Maserati to miss sales target | Another Audi EV coming

September 17, 2015

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1155 Gratiot Ave.
Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: McCabe, Janet[McCabe.Janet@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Conger, Nick
Sent: Thur 9/17/2015 8:05:07 PM
Subject: latest materials
DRAFT Internal QA doc_VW Defeat Device 9_17_15.docx
DRAFT VW Defeat Device_PR_9-17-15.docx

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

Follow us on Twitter @EPAJustice

To: Cook, Leila[cook.leila@epa.gov]
From: Bunker, Byron
Sent: Thur 9/17/2015 8:06:12 PM
Subject: FW: latest materials
DRAFT Internal QA doc_VW Defeat Device 9_17_15.docx
DRAFT VW Defeat Device_PR_9-17-15.docx

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Conger, Nick
Sent: Thursday, September 17, 2015 4:05 PM
To: McCabe, Janet; Bunker, Byron
Subject: latest materials

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

Follow us on Twitter @EPAJustice

To: Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]
Cc: Cohen, Janet[cohen.janet@epa.gov]
From: Bunker, Byron
Sent: Thur 9/17/2015 8:06:53 PM
Subject: FW: latest materials
DRAFT Internal QA doc_VW Defeat Device 9_17_15.docx
DRAFT VW Defeat Device_PR_9-17-15.docx

From: Conger, Nick
Sent: Thursday, September 17, 2015 4:05 PM
To: McCabe, Janet; Bunker, Byron
Subject: latest materials

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

Follow us on Twitter @EPAJustice

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Levy, Trey
Sent: Thur 9/17/2015 8:41:38 PM
Subject: Edits
VW NOV Draft 9_17_15v5_TreyEdits.docx

Hello Ms. Kaul,

I've completed the edits you requested. I have saved a copy within my intern file and the NOV file. Additionally, please find the document attached on this email. Mr. Belser has assigned me to **Ex. 5, 7**
He wants this done by next Wednesday. I will be coming into the EPA tomorrow to attend an intern event. Would you be available for discussion on how I should properly do this next task tomorrow?

Thank you kindly.

Best,

-Trey

Trey Everett Levy

EPA Office of Enforcement and Compliance Assurance

Legal Intern

American University Washington College of Law

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Giles-AA, Cynthia
Sent: Thur 9/17/2015 9:29:55 PM
Subject: RE: VW -- should we give you a packet of materials to send to the Regional Administrators tomorrow? (NOV, External Qs and As, CARB letter)

I don't think we need to do that. They will see it when announced and all that stuff will be on the web.

From: Brooks, Phillip
Sent: Thursday, September 17, 2015 5:29 PM
To: Giles-AA, Cynthia
Subject: VW -- should we give you a packet of materials to send to the Regional Administrators tomorrow? (NOV, External Qs and As, CARB letter)

To: karen.dworkin@usdoj.gov[karen.dworkin@usdoj.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]; Engel, Bethany (ENRD)[Bethany.Engel@usdoj.gov]; Allen, Leslie (ENRD)[Leslie.Allen@usdoj.gov]
From: Belser, Evan
Sent: Thur 9/17/2015 9:30:50 PM
Subject: Re: VW - Revised NOV now with Chron and further DOJ edits

Karen,

Ex. 5, 7

Open to your feedback.

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 17, 2015, at 5:17 PM, Dworkin, Karen (ENRD) <Karen.Dworkin@usdoj.gov> wrote:

Ex. 5, 7

From: Kaul, Meetu [mailto:Kaul.Meetu@epa.gov]
Sent: Thursday, September 17, 2015 3:25 PM
To: **Ex. 7** Van Eaton, Josh (ENRD) <JVanEaton@ENRD.USDOJ.GOV>; Engel, Bethany (ENRD) <BEngel@ENRD.USDOJ.GOV>; Allen, Leslie (ENRD) <LAllen@ENRD.USDOJ.GOV>; Dworkin, Karen (ENRD) <KDworkin@ENRD.USDOJ.GOV>; Fisherow, Walter Benjamin (ENRD) <WFisherow@ENRD.USDOJ.GOV>
Cc: Belser, Evan <Belser.Evan@epa.gov>; Werner, Jacqueline <Werner.Jacqueline@epa.gov>
Subject: FW: VW - Revised NOV now with Chron and further DOJ edits
Importance: High

Dear CARB and DOJ colleagues, further revision of the NOV with Cynthia Giles and DOJ comments incorporated.

Thank you

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kaul, Meetu
Sent: Thursday, September 17, 2015 3:22 PM
To: Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Orehowsky, Gregory; Bunker, Byron; Wehrly, Linc; Giles-AA, Cynthia; Starfield, Lawrence; Conger, Nick; Senn, John; Kelley, Rosemarie
Subject: VW - Revised NOV now with Chron and further DOJ edits
Importance: High

Ex. 5

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

Ex. 5, 7

Ex. 7

Sent from my iPhone

On Sep 17, 2015, at 5:29 PM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

FYI

I assume it is just the 4 of us, correct?

I think this will be uncomfortable enough for them without piling on.

Ex. 7 @vw.com]
Sent: Thursday, September 17, 2015 5:01 PM
To: Brooks, Phillip
Subject: Re: Providing conference line information

Hello Phil,

Dave and I have both cleared our schedules and we can meet at 9:00. Talk to you then.

Ex. 7

Sent from my iPhone

On Sep 17, 2015, at 2:33 PM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

> Just to be sure I gave you the correct information: the call tomorrow at 9:00am will be on a conference line at (Non-Responsive). The Conference Code is Non-Responsive
>
> If you have questions, or need assistance, please call.
>
> Philip A Brooks
>
> Director, Air Enforcement Division
>
> OCE/OECA
>
> U.S. Environmental Protection Agency
>
> (202) 564-0652

Ex. 4 - CBI

Cc: Gilham, Michael[Gilham.Michael@epa.gov]; Gairola, Sounjay[Gairola.Sounjay@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Kimes, Jeffrey
Sent: Thur 9/17/2015 10:37:55 PM
Subject: TD 87 Volkswagen Enforcement - High Priority
TD 87 Volkswagen Enforcement.docx

Ex. 4 - CBI

See the attached TD 87 for enforcement case support.

Some of the tasks are urgent and ERG should contact the technical leads (Evan and Meetu) to begin working on the activities described.

Jeffrey Kimes
Mobile Source Enforcement
Office of Enforcement and Compliance Assurance, Western Field Office
US EPA
1595 Wynkoop St., 8MSU
Denver, CO 80202
303/312-6445

Enforcement Confidential: Attorney Work Product and / or Attorney Client Communications

To: Reynolds, Thomas[Reynolds.Thomas@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
Cc: Millett, John[Millett.John@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Purchia, Liz[Purchia.Liz@epa.gov]; Valentine, Julia[Valentine.Julia@epa.gov]; Hull, George[Hull.George@epa.gov]; Cook, Leila[cook.leila@epa.gov]
From: Birgfeld, Erin
Sent: Thur 9/17/2015 10:57:42 PM
Subject: RE: VW PR

Ex. 5

+ Lee Cook

From: Birgfeld, Erin
Sent: Thursday, September 17, 2015 6:52 PM
To: Reynolds, Thomas; Cook, Leila; Conger, Nick; Senn, John
Cc: Millett, John; Hengst, Benjamin; Grundler, Christopher; Purchia, Liz; Valentine, Julia; Hull, George
Subject: VW PR

Hi all,

Attached is an updated PR **Ex. 5**

Ex. 5

Ex. 5 Please send along any additional edits on the clean version if you can or just in an email and I will incorporate.

Thank you!

-Erin

Erin Birgfeld

Communications Director

Office of Transportation and Air Quality

U.S. EPA

202-564-6741 (work)

202-255-4434 (cell)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: McCabe, Janet
Sent: Thur 9/17/2015 11:01:19 PM
Subject: Re: Reminder-I'm in a plane and won't be at the 4 pm VW MTG

I'm boarding now. Should be home by 9:30 if we need to talk. Things seem to be coming together. I had a good, short call with Mary. Always good to make that connection personallyz

Sent from my iPhone

> On Sep 17, 2015, at 3:46 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> Landing at 6
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Birgfeld, Erin
Sent: Thur 9/17/2015 11:34:30 PM
Subject: RE: Blocking off 30 minutes for follow up questions for Chris G. Friday afternoon?

Ex. 5

Roll out times are tight. Here they are:

Friday 9/18 – Day of Announcement

•□□□□□□□ 9:00 am – Heads up calls where appropriate (see call list below)

•□□□□□□□ 10:30 am Press advisory announcing a press call to OMR press list plus Autobeat reporters (AP, WSJ, NPR, Det. News, Chicago Trib, LA Times, Reuter, NYT, Auto News)

•□□□□□□□ 11:45 am – Web goes live

•□□□□□□□ 11:50 am – Press release

12:00 pm Press call with Janet McCabe, Cynthia Giles, Chris Grundler, possible CARB representative

From: Grundler, Christopher
Sent: Thursday, September 17, 2015 7:30 PM
To: Birgfeld, Erin
Subject: Re: Blocking off 30 minutes for follow up questions for Chris G. Friday afternoon?

Ex. 5

Can you send me the rollout times?

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 17, 2015, at 7:19 PM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:

> Sounds good.
>
> OECA wins the day on enforcement messaging I suppose….

Ex. 5

From: Grundler, Christopher
Sent: Thursday, September 17, 2015 7:15 PM
To: Birgfeld, Erin
Subject: Re: Blocking off 30 minutes for follow up questions for Chris G. Friday afternoon?

I will be flexible all afternoon. I noticed no Janet quote....

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 17, 2015, at 6:54 PM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:

> Ok. Sounds good. Does 2-3 pm work?

I'll set up a call in line that you can link into. Then the press officer can loop in the reporter from there.

Sent from my iPhone

On Sep 17, 2015, at 6:01 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

> Should probably block off more time if past is prologue
>
> Christopher Grundler, Director
>
> Office of Transportation and Air Quality
>
> U.S. EPA
>
> 202-564-1682 (DC)
>
> 734-214-4207 (Ann Arbor)
>
> On Sep 17, 2015, at 5:20 PM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:
>
> > Hi Chris,
> >
> > If you can spare 30 minutes any time between 2-3:30, let's set up a time where you can take any lingering press questions. Let me know what works and I'll send a placeholder invitation tonight.
> >
> > Thank you!
> >
> > Erin
> >
> > **From:** Allen, Laura
> > **Sent:** Thursday, September 17, 2015 5:14 PM
> > **To:** Valentine, Julia; Birgfeld, Erin

Cc: Millett, John; Hengst, Benjamin; Hull, George
Subject: Re: Blocking off 30 minutes for follow up questions for Chris G. Friday afternoon?

Yeah- that sounds good. We'll have to play by ear to see if there are interview requests not accommodated by audio from the press call.

From: Valentine, Julia
Sent: Thursday, September 17, 2015 5:09 PM
To: Birgfeld, Erin; Allen, Laura
Cc: Millett, John; Hengst, Benjamin; Hull, George
Subject: Re: Blocking off 30 minutes for follow up questions for Chris G. Friday afternoon?

+ George

From: Birgfeld, Erin
Sent: Thursday, September 17, 2015 3:52 PM
To: Allen, Laura; Valentine, Julia
Cc: Millett, John; Hengst, Benjamin
Subject: Blocking off 30 minutes for follow up questions for Chris G. Friday afternoon?

Hi Laura and Julia,

For other roll outs we have blocked 30 minutes of Chris's time a few hours after the press call so he can sweep up any remaining questions. He is traveling so if we want to do that I want to coordinate his schedule now.

Let me know if you think we should do this and thanks.

-Erin

Erin Birgfeld

Communications Director

Office of Transportation and Air Quality

U.S. EPA

202-564-6741 (work)

202-255-4434 (cell)

To: Belser, Evan[Belser.Evan@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Conger, Nick
Sent: Thur 9/17/2015 11:56:55 PM
Subject: FW: VW remarks
Cynthia Giles Remarks for Press Call re Volkswagen NOVsv3.docx

Fyi

Sent from my Windows Phone

From: Conger, Nick
Sent: 9/17/2015 7:02 PM
To: Thomas Reynolds (Reynolds.Thomas@epa.gov); Purchia, Liz
Subject: VW remarks

Latest Cynthia remarks.

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

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Cynthia Giles Remarks for Press Call re Volkswagen NOVs
September 18, 2015

- Today, EPA has sent a Notice of Violation of the Clean Air Act to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc. alleging that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards.

- Put simply, these cars contain software that turns off emissions controls when driving normally, and turns them on when the car is undergoing an emission test.

- Known as a "defeat device," this design feature results in the cars emitting between 10 and 100 times the emissions that are allowed to ensure public health is protected.

- As more fully described in the Notice of Violation sent today, Volkswagen manufactured and installed software in the electronic control module of these vehicles which sensed when the vehicle was being tested for compliance with EPA emission standards.

- These devices contain a "switch" that senses whether the vehicle is being tested or not based on various inputs, including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure.

- These emissions tests underpin the certifications that manufacturers are required to secure under the Clean Air Act, to certify that their products meet applicable federal emission standards to control air pollution.

- By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, VW violated two important provisions of the Clean Air Act.

- These violations are very serious. Not only because the illegal defeat device results in excess emissions many times the allowable standard, but also because VW was concealing the facts from EPA, the State of California, and

from consumers. We expected better from VW.

- Although our investigation continues, we thought it was important to inform the public right away of these significant violations, and to put Volkswagen on notice of our continuing investigation.

- We will continue to work closely with California and now also with DOJ to see this through.

I will now turn it over to Janet McCabe from EPA's Office of Air and Radiation.

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Ex. 7
From: Ex. 7
Sent: Fri 9/18/2015 1:37:49 AM
Subject: FW: IUC Final Letter
IUC-2015-007 letter to Volkswagen AG_2015-9-18.pdf

Phil,

Attached is our final in-use letter.

Todd Sax

From: Ex. 7
Sent: Thursday, September 17, 2015 6:32 PM
To: [redacted]
Ex. 7
Subject: IUC Final Letter

Ex. 7

Air Resources Board

Mary D. Nichols, Chair
9480 Telstar Avenue, Suite 4
El Monte, California 91731 • www.arb.ca.gov

Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

Reference No. IUC-2015-007

September 18, 2015

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Through:

Ex. 7

Executive Vice President and General Counsel, Government Affairs
Volkswagen Group of America
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Ex. 7

Volkswagen Group of America

Ex. 7

Re: Admission of Defeat Device and California Air Resources Board's Requests

Dear **Ex. 7** and **Ex. 7**

In order to protect public health and the environment from harmful pollutants, the California Air Resources Board (CARB) rigorously implements its vehicle regulations through its certification, in use compliance, and enforcement programs. In addition to the new vehicle certification process, CARB regularly tests automobiles to ensure their emissions performance is as expected throughout their useful life, and performs investigative testing if warranted. In 2014, the International Council for Clean Transportation (ICCT) and West Virginia University (WVU) identified through their test program, and brought to the CARB's and the United States Environmental Protection Agency's (EPA) attention, concerns of elevated oxides of nitrogen (NOx) emissions over real world driving. This prompted CARB to start an investigation and discussions with the Volkswagen Group of America (VW) on the reasons behind these high NOx

VW FOIA, EPA 06/20/2017 2017-FFP_023862

emissions observed on their 2.0 liter diesel vehicles over real world driving conditions. As you know, these discussions over several months culminated in VW's admission in early September 2015 that it has, since model year 2009, employed a defeat device to circumvent CARB and the EPA emission test procedures.

VW initiated testing to replicate the ICCT/WVU testing and identify the technical reasons for the high on-road emissions. VW shared the results of this testing and a proposed recalibration fix for the Gen1 (Lean NOx Trap technology) and Gen2 (Selective Catalytic Reduction (SCR) technology) with CARB staff on December 2, 2014. Based on this meeting, CARB and EPA at that time agreed that VW could implement the software recall; however, CARB cautioned VW that if our confirmatory testing showed that the fix did not address the on-road NOx issues, they would have to conduct another recall. Based on this meeting, VW initiated a voluntary recall in December 2014 which, according to VW, affected approximately 500,000 vehicles in the United States (~50,000 in California). The recall affected all 2009 to 2014 model-year diesel fueled vehicles equipped with Gen1 and Gen2 technology. This recall was claimed to have fixed among other things, the increased real world driving NOx issue.

CARB commenced confirmatory testing on May 6, 2015 to determine the efficacy of the recall on both the Gen1 and Gen2 vehicles. CARB confirmatory testing was completed on a 2012 model-year Gen2 VW, test group CVWX02.0U4S, to be followed with Gen1 testing. CARB staff tested this vehicle on required certification cycles (FTP, US06 and HWFET) and over-the-road using a Portable Emission Measurement Systems (PEMS). On some certification cycles, the recall calibration resulted in the vehicle failing the NOx standard. Over-the-road PEMS testing showed that the recall calibration did reduce the emissions to some degree but NOx emissions were still significantly higher than expected.

To have a more controlled evaluation of the high NOx observed over the road, CARB developed a special dynamometer cycle which consisted of driving the Phase 2 portion of the FTP repeatedly. This special cycle revealed that VW's recall calibration did increase Diesel Exhaust Fluid (DEF) dosing upon initial startup; however, dosing was not sufficient to keep NOx emission levels from rising throughout the cycle. This resulted in uncontrolled NOx emissions despite the SCR reaching sufficient operating temperatures.

CARB shared its test results with VW on July 8, 2015. CARB also shared its results with the EPA. Several technical meetings with VW followed where VW disclosed that Gen1, Gen2 and the 2015 model-year improved SCR vehicle (known as the Gen3) had a second calibration intended to run only during certification testing. During a meeting on September 3, 2015, VW admitted to CARB and EPA staff that these vehicles were designed and manufactured with a defeat device to bypass, defeat, or render inoperative elements of the vehicles' emission control system. This defeat device was neither described nor justified in the certification applications submitted to EPA and

VW FOIA, EPA 06/20/2017 2017-FFP_023863

CARB. Therefore, each vehicle so equipped would not be covered by a valid federal Certificate of Conformity (COC) or CARB Executive Order (EO) and would be in violation of federal and state law.

Based upon our testing and discussions with VW, CARB has determined that the previous recall did not address the high on-road NOx emissions, and also resulted in the vehicle failing certification standards. Therefore, the recall is deemed ineffective and is deemed unapproved. VW must immediately initiate discussions with CARB to determine the appropriate corrective action to rectify the emission non-compliance and return these vehicles to the claimed certified configuration. CARB program and enforcement staff is prepared to work closely with VW to find corrective actions to bring these vehicles into compliance.

CARB has also initiated an enforcement investigation of VW regarding all model-year 2009 through 2015 light-duty diesel vehicles equipped with 2.0 liter engines. We expect VW's full cooperation in this investigation so this issue can be addressed expeditiously and appropriately.

Sincerely,

Ex. 7

cc: Mr. Byron Bunker, Director
Compliance Division
Office of Transportation and Air Quality
Office of Air and Radiation
U.S. Environmental Protection Agency

Mr. Linc Wehrly, Director
Environmental Protection Agency
Light-Duty Vehicle Center
2000 Traverwood Drive
Ann Arbor, MI 48105

Ex. 7

VW FOIA, EPA 06/20/2017 2017-FFP_023864

To: Belser, Evan[Belser.Evan@epa.gov]
From: Ex. 6
Sent: Fri 9/18/2015 4:03:49 AM
Subject: Message from Intern Ex. 6

Hello Mr. Belser,
Thank you for assigning me to the letter response today, I look forward to being able to work on it.

However, that is also why I am contacting you. I am not sure how to appropriately draft it, but I want to make sure I do it correctly. Although I don't work on Fridays, I am usually at the EPA for an intern event between 11:30am-1pm on those days. Would you be able to spare a few minutes at either 11am or just after 1pm to discuss the format of your assignment? I spoke to my personal mentor, Ms. Kaul, about it and she recommended that I contact you directly about it. I know everyone seems swamped with the greater VW matter, but a few minutes would be greatly appreciated.

Please let me know.

Best,

Ex. 6

P.S. I sincerely apologize for emailing you at such a late hour.

Ex. 6

To: Ex. 6
From: Belser, Evan
Sent: Fri 9/18/2015 10:49:01 AM
Subject: Re: Message from Intern Ex. 6

Hello Ex. 6

Thanks for your quick attention to this assignment. I'd be happy to give you some guidance. However let's do it next week at a convenient time. I'll be tied up with other matters and I don't expect you to work on your day off. In the end this will be a very simple and straightforward letter.

Thanks,
Evan

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 18, 2015, at 12:03 AM, Ex. 6 Ex. 6 wrote:

> Hello Mr. Belser,
> Thank you for assigning me to the letter response today, I look forward to being able to work on it.
>
> However, that is also why I am contacting you. I am not sure how to appropriately draft it, but I want to make sure I do it correctly. Although I don't work on Fridays, I am usually at the EPA for an intern event between 11:30am-1pm on those days. Would you be able to spare a few minutes at either 11am or just after 1pm to discuss the format of your assignment? I spoke to my personal mentor, Ms. Kaul, about it and she recommended that I contact you directly about it. I know everyone seems swamped with the greater VW matter, but a few minutes would be greatly appreciated.
>
> Please let me know.
>
> Best,
>
> Ex. 6
>
> P.S. I sincerely apologize for emailing you at such a late hour.
>
> --
> Ex. 6
> JD Candidate 2017

Ex. 6

To: Ball, Joel[ball.joel@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]
From: Wehrly, Linc
Sent: Fri 9/18/2015 12:23:44 PM
Subject: FW: WVU Report
WVU_LDDV_in-use_ICCT_Report_Final_may2014.pdf

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Bunker, Byron
Sent: Thursday, September 17, 2015 3:22 PM
To: Birgfeld, Erin; Millett, John
Cc: Hengst, Benjamin; Cohen, Janet; Wehrly, Linc; Cook, Leila
Subject: WVU Report

You will surely be asked – here is the WVU report.

http://www.theicct.org/sites/default/files/publications/WVU_LDDV_in-use_ICCT_Report_Final_may2014.pdf

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Joel Ball[Ball.Joel@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Dalton, Joel[dalton.joel@epa.gov]; wright.davida@epa.gov[wright.davida@epa.gov]
From: Wehrly, Linc
Sent: Fri 9/18/2015 12:23:44 PM
Subject: FW: WVU Report
WVU_LDDV_in-use_ICCT_Report_Final_may2014.pdf

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Bunker.Byron@epa.gov

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****

To: Belser, Evan[Belser.Evan@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Senn, John[Senn.John@epa.gov]
From: Conger, Nick
Sent: Fri 9/18/2015 12:47:14 PM
Subject: FW: VW PR - latest version
DRAFT VW Defeat Device_PR_9-17-15 9pm for CARB.DOCX

Can one of you do one last read through of this press release to make sure there are no inaccuracies?

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

Follow us on Twitter @EPAJustice

From: Senn, John
Sent: Friday, September 18, 2015 8:44 AM
To: Conger, Nick
Subject: FW: VW PR - latest version

From: Millett, John
Sent: Friday, September 18, 2015 8:15 AM
To: Bunker, Byron; Hengst, Benjamin; Birgfeld, Erin; Senn, John
Subject: RE: VW PR - latest version

Here you go --

~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

From: Bunker, Byron
Sent: Friday, September 18, 2015 8:08 AM
To: Hengst, Benjamin; Birgfeld, Erin; Millett, John; Senn, John
Subject: VW PR - latest version

The latest version of the PR that I can find is from Erin at 8:24 PM yesterday. Is there a newer one that I should be working from? Assuming yes, can someone flip that my way?

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105
~~~~~~~~~~~~~~~~

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Hengst, Benjamin
Sent: Friday, September 18, 2015 7:36 AM
To: Grundler, Christopher
Cc: Bunker, Byron; Millett, John; Brooks, Phillip; Birgfeld, Erin; Cook, Leila; Conger, Nick; Senn, John
Subject: Re: VW dox

Minus Avi/Cynthia/Janet

Internal Q&A: I think we are done with the attached:

Ex. 5

Ex. 5

Press Release: I defer to **Millet/Erin/Byron** to finalize that language.

Byron, when you are done with edits to the attached documents, can you send to Erin and John--I'd ask that either Erin or John send out the final versions of all documents to the whole group, get them ready for web, etc.

Thanks,

Ben

From: Grundler, Christopher
Sent: Friday, September 18, 2015 6:48 AM
To: McCabe, Janet
Cc: Bunker, Byron; Millett, John; Hengst, Benjamin; Giles-AA, Cynthia; Brooks, Phillip; Birgfeld, Erin; Garbow, Avi
Subject: Re: VW dox

Good comments

Ben- do you still have the pen?

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 17, 2015, at 11:46 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:

> here are my comments on the other pieces.

From: Janet McCabe <janetgmccabe@gmail.com>
Sent: Thursday, September 17, 2015 11:42 PM
To: McCabe, Janet

Subject: VW dox

Ex. 5

Just beat midnight, John….

<VW DRAFT Internal QA doc_VW Defeat Device 9_17_15 830pm jm.docx>

<VW CG + JMc Remarks for Press Call re Volkswagen NOVs jm.docx>

<VW DRAFT consumer facing page VW defeat device 9 17 15 830pm jm.docx>

To: Conger, Nick[Conger.Nick@epa.gov]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Belser, Evan
Sent: Fri 9/18/2015 12:56:02 PM
Subject: Re: VW PR - latest version

Yes I'll have that by 10 AM

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 18, 2015, at 8:47 AM, Conger, Nick <Conger.Nick@epa.gov> wrote:

> Can one of you do one last read through of this press release to make sure there are no inaccuracies?
>
> Nick Conger
>
> Communications Director
>
> Office of Enforcement and Compliance Assurance
>
> U.S. Environmental Protection Agency
>
> Office: (202) 564-6287
>
> Cell: (202) 412-2655
>
> Follow us on Twitter @EPAJustice
>
> **From:** Senn, John
> **Sent:** Friday, September 18, 2015 8:44 AM
> **To:** Conger, Nick
> **Subject:** FW: VW PR - latest version

From: Millett, John
Sent: Friday, September 18, 2015 8:15 AM
To: Bunker, Byron; Hengst, Benjamin; Birgfeld, Erin; Senn, John
Subject: RE: VW PR - latest version

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John Millett

Director, OAR Communications

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Thanks,

Byron

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Byron Bunker
~~~~~~~~~~~~~~~~

Director Compliance Division

Office of Transportation and Air Quality

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Sent: Friday, September 18, 2015 7:36 AM
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Cc: Bunker, Byron; Millett, John; Brooks, Phillip; Birgfeld, Erin; Cook, Leila; Conger, Nick; Senn, John
Subject: Re: VW dox

Minus Avi/Cynthia/Janet

Internal Q&A: I think we are done with the attached:

Consumer facing web page: I did what I could with Janet's comments but I need **Byron** to answer some of the questions Janet left in bubbles. In particular, she has comments about **Ex. 5**

Script: I cleaned up the document,and we should be almost done. **Byron** can you pls take a look and make consistent with **Ex. 5**

Press Release: I defer to **Millet/Erin/Byron** to finalize that language.

Byron, when you are done with edits to the attached documents, can you send to Erin and John--I'd ask that either Erin or John send out the final versions of all documents to the whole group, get them ready for web, etc.

Thanks,

Ben

From: Grundler, Christopher
Sent: Friday, September 18, 2015 6:48 AM
To: McCabe, Janet
Cc: Bunker, Byron; Millett, John; Hengst, Benjamin; Giles-AA, Cynthia; Brooks, Phillip; Birgfeld, Erin; Garbow, Avi
Subject: Re: VW dox

Good comments

Ben- do you still have the pen?

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 17, 2015, at 11:46 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:

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From: Janet McCabe <janetgmccabe@gmail.com>
Sent: Thursday, September 17, 2015 11:42 PM
To: McCabe, Janet
Subject: VW dox

Folks—here are my comments on the remaining documents. One issue that's throughout i

Ex. 5

Just beat midnight, John….

<VW DRAFT Internal QA doc_VW Defeat Device 9_17_15 830pm jm.docx>

<VW CG + JMc Remarks for Press Call re Volkswagen NOVs jm.docx>

<VW DRAFT consumer facing page VW defeat device 9 17 15 830pm jm.docx>

<DRAFT VW Defeat Device_PR_9-17-15 9pm for CARB.DOCX>

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Werner, Jacqueline
Sent: Fri 9/18/2015 1:19:13 PM
Subject: Fwd: VW Press release, internal Q&A and consumer web site language

FYI

Sent from my iPhone
Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

Begin forwarded message:

From: "Senn, John" <Senn.John@epa.gov>
Date: September 18, 2015 at 9:04:22 AM EDT
To: "Conger, Nick" <Conger.Nick@epa.gov>, "Belser, Evan" <Belser.Evan@epa.gov>, "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>, "Brooks, Phillip" <Brooks.Phillip@epa.gov>
Subject: RE: VW Press release, internal Q&A and consumer web site language

Ex. 5

From: Conger, Nick
Sent: Friday, September 18, 2015 9:02 AM
To: Belser, Evan; Werner, Jacqueline; Brooks, Phillip
Cc: Senn, John
Subject: FW: VW Press release, internal Q&A and consumer web site language

Ex. 5

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

Follow us on Twitter @EPAJustice

From: Hengst, Benjamin
Sent: Thursday, September 17, 2015 9:23 PM
To: McCabe, Janet; Giles-AA, Cynthia
Cc: Reynolds, Thomas; Bunker, Byron; Brooks, Phillip; Millett, John; Grundler, Christopher; Conger, Nick; Senn, John; Birgfeld, Erin
Subject: VW Press release, internal Q&A and consumer web site language

Hi Janet, Cynthia:

Attached are current versions of the internal Q&A, the consumer-facing website, and the PR. (Apologies if you already received these). These reflect edits that have come in since our 4pm meeting earlier today. These have been shared with California and we will make updates as edits come in.

Thanks,

Ben

To: Belser, Evan[Belser.Evan@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Bunker, Byron
Sent: Fri 9/18/2015 1:20:55 PM
Subject: FW: Ex. 5

Ex. 5

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Bunker, Byron
Sent: Friday, September 18, 2015 9:20 AM
To: Millett, John; Giles-AA, Cynthia; McCabe, Janet; Grundler, Christopher; Hengst, Benjamin; Brooks, Phillip; Garbow, Avi
Cc: Birgfeld, Erin; Senn, John; Conger, Nick
Subject: Ex. 5
Importance: High

Ex. 5

Thanks,

Byron

****

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Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Millett, John
Sent: Friday, September 18, 2015 9:10 AM
To: Giles-AA, Cynthia; McCabe, Janet; Grundler, Christopher; Hengst, Benjamin; Bunker, Byron; Brooks, Phillip; Garbow, Avi
Cc: Birgfeld, Erin; Senn, John; Conger, Nick
Subject: RE: Comments on press release

Thanks! Final draft of the PR redline and clean copies

~~~~~~~~~~~~~~~~

John Millett
~~~~~~~~~~~~~~~~

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

From: Giles-AA, Cynthia
Sent: Friday, September 18, 2015 9:04 AM
To: Millett, John; McCabe, Janet; Grundler, Christopher; Hengst, Benjamin; Bunker, Byron; Brooks, Phillip; Garbow, Avi
Subject: RE: Comments on press release

Good. Thanks.

From: Millett, John
Sent: Friday, September 18, 2015 9:02 AM
To: Giles-AA, Cynthia; McCabe, Janet; Grundler, Christopher; Hengst, Benjamin; Bunker, Byron; Brooks, Phillip; Garbow, Avi
Subject: RE: Comments on press release

Ex. 5

~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

From: Giles-AA, Cynthia
Sent: Thursday, September 17, 2015 11:19 PM
To: McCabe, Janet; Millett, John; Grundler, Christopher; Hengst, Benjamin; Bunker, Byron; Brooks, Phillip; Garbow, Avi
Subject: RE: Comments on press release

Ex. 5

Sent from my Windows Phone

From: McCabe, Janet
Sent: 9/17/2015 10:42 PM
To: Millett, John; Grundler, Christopher; Hengst, Benjamin; Bunker, Byron; Giles-AA, Cynthia; Brooks, Phillip; Garbow, Avi
Subject: Fw: Comments on press release

Sorry to be getting to this so late. My remote access has been acting up tonight and it's taking forever to open documents, etc.

Here are my comments on the press release, which I think looks great except for the couple of things I note below. Folks may all be fine, but I wanted to bring them up.

I'll read the other stuff now.
~~~~~~~~~~~~~~~~

From: Janet McCabe <janetgmccabe@gmail.com>
Sent: Thursday, September 17, 2015 10:34 PM
To: McCabe, Janet
Cc: 'Janet McCabe'
Subject: Comments on press release

Ex. 5

From: McCabe, Janet [mailto:McCabe.Janet@epa.gov]
Sent: Thursday, September 17, 2015 9:55 PM
To: Janet McCabe
Subject: Fwd: VW Press release, internal Q&A and consumer web site language

Sent from my iPhone

Begin forwarded message:

From: "Millett, John" <Millett.John@epa.gov>
To: "McCabe, Janet" <McCabe.Janet@epa.gov>
Subject: Fwd: VW Press release, internal Q&A and consumer web site language

Latest of everything. No tweaks from OTAQ to the talkers.

John Millett

202.510.1822

Begin forwarded message:

From: "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>
To: "Grundler, Christopher" <grundler.christopher@epa.gov>, "Senn, John" <Senn.John@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>, "Belser, Evan" <Belser.Evan@epa.gov>, "Sutton, Tia" <sutton.tia@epa.gov>, "Brooks, Phillip" <Brooks.Phillip@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>
Cc: "Allen, Laura" <Allen.Laura@epa.gov>, "Valentine, Julia" <Valentine.Julia@epa.gov>, "Hull, George" <Hull.George@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>, "Cook, Leila" <cook.leila@epa.gov>, "Wehrly, Linc" <wehrly.linc@epa.gov>
Subject: FW: VW Press release, internal Q&A and consumer web site language

Hi all,

I'm sharing the current drafts of the VW communications materials. We just sent these over to the CARB team for review.

Thanks everyone!

Erin

From: Birgfeld, Erin
Sent: Thursday, September 17, 2015 8:56 PM
To: 'Young, Stanley@ARB'
Cc: Millett, John; Hengst, Benjamin
Subject: VW Press release, internal Q&A and consumer web site language

Hi Stanley,

Attached is the PR, Internal Q and A, and a Q and A doc for consumers that we will put on our website. Let us know if there are tweaks. Thank you!

Thanks,

Erin

Erin Birgfeld

Communications Director

Office of Transportation and Air Quality

U.S. EPA

202-564-6741 (work)

202-255-4434 (cell)

To: Conger, Nick[Conger.Nick@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Senn, John[Senn.John@epa.gov]
From: Belser, Evan
Sent: Fri 9/18/2015 1:52:26 PM
Subject: RE: VW PR - latest version
DRAFT VW Defeat Device_PR_9-18-15 10am.docx

AED's edits attached.

From: Conger, Nick
Sent: Friday, September 18, 2015 8:47 AM
To: Belser, Evan; Brooks, Phillip
Cc: Senn, John
Subject: FW: VW PR - latest version

Can one of you do one last read through of this press release to make sure there are no inaccuracies?

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

Follow us on Twitter @EPAJustice

From: Senn, John
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To: Conger, Nick
Subject: FW: VW PR - latest version

From: Millett, John
Sent: Friday, September 18, 2015 8:15 AM
To: Bunker, Byron; Hengst, Benjamin; Birgfeld, Erin; Senn, John
Subject: RE: VW PR - latest version

Here you go --

~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

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Thanks,

Byron

****
~~~~~~~~~~~~~~~~

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Hengst, Benjamin
Sent: Friday, September 18, 2015 7:36 AM
To: Grundler, Christopher
Cc: Bunker, Byron; Millett, John; Brooks, Phillip; Birgfeld, Erin; Cook, Leila; Conger, Nick; Senn, John
Subject: Re: VW dox

Minus Avi/Cynthia/Janet

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Script: I cleaned up the document,and we should be almost done. **Byron** can you pls take a look and make consistent with **Ex. 5**

Press Release: I defer to **Millet/Erin/Byron** to finalize that language.

Byron, when you are done with edits to the attached documents, can you send to Erin and John--I'd ask that either Erin or John send out the final versions of all documents to the whole group, get them ready for web, etc.

Thanks,

Ben

From: Grundler, Christopher
Sent: Friday, September 18, 2015 6:48 AM
To: McCabe, Janet
Cc: Bunker, Byron; Millett, John; Hengst, Benjamin; Giles-AA, Cynthia; Brooks, Phillip; Birgfeld, Erin; Garbow, Avi
Subject: Re: VW dox

Good comments

Ben- do you still have the pen?

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

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Subject: VW dox

Folks—here are my comments on the remaining documents. One issue that's throughout

Ex. 5

Just beat midnight, John….

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<VW CG + JMc Remarks for Press Call re Volkswagen NOVs jm.docx>

<VW DRAFT consumer facing page VW defeat device 9 17 15 830pm jm.docx>

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Fisherow, Walter Benjamin (ENRD)[Walter.Benjamin.Fisherow@usdoj.gov]; Ex. 5, 7
Ex. 5, 7
Sent: Fri 9/18/2015 1:56:27 PM
Subject: RE: Providing conference line information

Ex. 5, 7

Ex. 5, 7

From: Ex. 7 (EEO) [mailto: Ex. 7 @vw.com]
Sent: Thursday, September 17, 2015 5:01 PM
To: Brooks, Phillip
Subject: Re: Providing conference line information

Hello Phil,

Dave and I have both cleared our schedules and we can meet at 9:00. Talk to you then.

Ex. 7

Sent from my iPhone

On Sep 17, 2015, at 2:33 PM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

> Just to be sure I gave you the correct information: the call tomorrow at 9:00am

will be on a conference line at Non-Responsive The Conference Code is Non-Responsive Non-Responsive

If you have questions, or need assistance, please call.

Philip A Brooks

Director, Air Enforcement Division

OCE/OECA

U.S. Environmental Protection Agency

(202) 564-0652

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Fri 9/18/2015 2:01:14 PM
Subject: VW - Final Executed NOV
NOV2015-09-18-095909.pdf

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: DC-WJCS-1109-M@epa.gov [mailto:DC-WJCS-1109-M@epa.gov]
Sent: Friday, September 18, 2015 9:59 AM
To: Kaul, Meetu
Subject:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_023902

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

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use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

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violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_023906

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_023907

To: Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]; Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Millett, John[Millett.John@epa.gov]
From: Belser, Evan
Sent: Fri 9/18/2015 2:08:51 PM
Subject: Executed VW NOV
VW NOV Final Executed 09-18-15.pdf

Please find attached the final, executed NOV for VW. This is ready for web posting and public dissemination according to our plans.

Big thanks to Meetu Kaul, lead author on this. Thank you everyone for your invaluable input.

Evan

Evan Belser

Chief, Mobile Source Enforcement Branch, Air Enforcement Division

National Coordinator for Administrative Litigation, Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

202-564-6850

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

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devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

VW FOIA, EPA 06/20/2017 2017-FFP_023910

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

VW FOIA, EPA 06/20/2017 2017-FFP_023912

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_023913

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
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William Jefferson Clinton Federal Building
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kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_023914

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Ex. 7 @ARB
Sent: Fri 9/18/2015 2:13:46 PM
Subject: RE: Call just ended

Same here.

Ex. 7

Ex. 7

California Air Resources Board

Ex. 7

Ex. 7 @arb.ca.gov

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Friday, September 18, 2015 7:07 AM
To: Ex. 7 @ARB
Subject: RE: Call just ended

Thank you.

I look forward to working with you and your team no this matter.

From: Ex. 7 @ARB Ex. 7 @arb.ca.gov]
Sent: Friday, September 18, 2015 10:03 AM
To: Brooks, Phillip
Subject: RE: Call just ended

Just got off with him. He was obviously busy with calls after your call.

Ex. 7

Ex. 7

California Air Resources Board

Ex. 7

Ex. 7 arb.ca.gov

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Friday, September 18, 2015 6:17 AM
To: Ex. 7 @ARB
Subject: Call just ended

Sent from my iPhone

On Sep 18, 2015, at 8:54 AM, Ex. 7 @ARB Ex. 7 @arb.ca.gov> wrote:

Ex. 7 mobile Ex. 6

> Sent from my ARB iPhone
>
> On Sep 18, 2015, at 5:01 AM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:
>
> > Yes. We are scheduled to talk at 9:00am Eastern. I cannot imagine that this call would last longer than 30 minutes.
> >
> > Sent from my iPhone
> >
> > On Sep 18, 2015, at 7:58 AM, Ex. 7 @ARB Ex. 7 @arb.ca.gov> wrote:
> >
> > > Phillip,
> > >
> > > Can you call me or email me right after you talk to VW so I can make my call right after you.

Sent from my ARB iPhone

On Sep 18, 2015, at 2:49 AM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

Looks good. Thanks

Sent from my iPhone

On Sep 18, 2015, at 12:55 AM, Ex. 7 @ARB < Ex. 7 @arb.ca.gov> wrote:

Phil, Ex. 7

Ex. 5, 7

Please let me know if you have any concerns.

Ex. 7

From: Ex. 7 @ARB
Sent: Thursday, September 17, 2015 7:33 PM
To: 'Belser, Evan'

Ex. 7

Subject: RE: VW - Revised NOV now with Chron and further DOJ edits

Evan,

Ex. 5, 7

Ex. 5, 7

We have finalized the letter, which was sent to Phil one hour ago. If you have further questions please feel free to let me know.

Thanks,

Ex. 7

From: Belser, Evan [mailto:Belser.Evan@epa.gov]
Sent: Thursday, September 17, 2015 6:44 PM
To: Ex. 7 @ARB

Ex. 7

Subject: Re: VW - Revised NOV now with Chron and further DOJ edits

Thank you for the chance to review. I'm weighing in only to ask

Ex. 5, 7

Thanks,

Evan

Evan Belser

Chief, Mobile Source Enforcement Branch

US EPA

On Sep 17, 2015, at 5:31 PM Ex. 7 @ARB
Ex. 7 @arb.ca.gov> wrote:

Phil, Meetu,

Attached is ARB's current draft of the in-use compliance letter. We think this is close to completed so please let us know if you see any glaring issues. The letter contains the chronology as we understand it so the NOV should hopefully be consistent. If you see a discrepancy please let me know.

Ex. 7

From: Ex. 7 @ARB
Sent: Thursday, September 17, 2015 1:20 PM
To: 'Kaul, Meetu'; Ex. 7
Ex. 7
Cc: Werner, Jacqueline; Belser, Evan; Hengst, Benjamin; Bunker, Byron; Cohen, Janet
Subject: RE: VW - Revised NOV now with Chron and further DOJ edits

Meetu,

Ex. 5, 7
recommend you revise your NOV on that point as well.

Thanks,

Ex. 7

From: Kaul, Meetu [mailto:Kaul.Meetu@epa.gov]
Sent: Thursday, September 17, 2015 12:30 PM

Ex. 7

Subject: FW: VW - Revised NOV now with Chron and further DOJ edits
Importance: High

Apologies for the multiple emails. Trying to get this out to all the appropriate CARB (and some more EPA) folks.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kaul, Meetu
Sent: Thursday, September 17, 2015 3:25 PM
To: Ex. 7
Ex. 7 'Van Eaton, Josh (ENRD)'; 'Engel, Bethany (ENRD)'; Allen, Leslie (ENRD); karen.dworkin@usdoj.gov; 'Benjamin.fisherow@usdoj.gov'
Cc: Belser, Evan; Werner, Jacqueline
Subject: FW: VW - Revised NOV now with Chron and further

DOJ edits
Importance: High

Dear CARB and DOJ colleagues, further revision of the NOV with Cynthia Giles and DOJ comments incorporated.

Thank you

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kaul, Meetu
Sent: Thursday, September 17, 2015 3:22 PM
To: Brooks, Phillip; Werner, Jacqueline; Belser, Evan; Orehowsky, Gregory; Bunker, Byron; Wehrly, Linc; Giles-AA, Cynthia; Starfield, Lawrence; Conger, Nick; Senn, John; Kelley, Rosemarie
Subject: VW - Revised NOV now with Chron and further DOJ edits
Importance: High

This version incorporates Cynthia's comments that we include a

Ex. 5, 7

additional comments received from DOJ. I'll forward to ARB and DOJ as well.

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

Ex. 5, 7

To: Geanacopoulos.David@vw.com[Geanacopoulos.David@vw.com];
Ex. 7 @vw.com]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; stuart.drake@kirkland.com[stuart.drake@kirkland.com]
From: Kaul, Meetu
Sent: Fri 9/18/2015 2:16:39 PM
Subject: Notice of Violation
VW NOV Final Executed 09-18-15.pdf

Mr. Geanacopoulous and Ex. 7

Per your conversation this morning with Mr. Brooks and others, attached please find EPA's Notice of Violation issued today.

Please contact me with any questions.

Regards,

Meetu Kaul

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_023924

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

VW FOIA, EPA 06/20/2017 2017-FFP_023925

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

VW FOIA, EPA 06/20/2017 2017-FFP_023927

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_023928

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_023929

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_023930

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

VW FOIA, EPA 06/20/2017 2017-FFP_023931

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

VW FOIA, EPA 06/20/2017 2017-FFP_023933

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_023934

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_023935

To: Bunker, Byron[bunker.byron@epa.gov]; Ex. 7 @arb.ca.gov]; Ex. 7 @arb.ca.gov]; Ex. 7 @arb.ca.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]; Evan Belser[Belser.Evan@epa.gov]
From: Brooks, Phillip
Sent: Fri 9/18/2015 2:20:24 PM
Subject: NOV transmitted to VW -- Copy attached
VW NOV Final Executed 09-18-15.pdf

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

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ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_023937

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

VW FOIA, EPA 06/20/2017 2017-FFP_023940

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_023941

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_023942

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_023943

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

VW FOIA, EPA 06/20/2017 2017-FFP_023944

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

VW FOIA, EPA 06/20/2017 2017-FFP_023946

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_023947

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_023948

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Bunker, Byron
Sent: Fri 9/18/2015 2:22:01 PM
Subject: RE: NOV transmitted to VW -- Copy attached

Thanks!

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Brooks, Phillip
Sent: Friday, September 18, 2015 10:20 AM
To: Bunker, Byron; Hebert, Annette@ARB; Sax, Todd@ARB; Peter, Ellen M. @ARB
Cc: Kaul, Meetu; Belser, Evan
Subject: NOV transmitted to VW -- Copy attached

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Belser, Evan
Sent: Fri 9/18/2015 2:24:54 PM
Subject: RE: Executed VW NOV

Ex. 5

From: Grundler, Christopher
Sent: Friday, September 18, 2015 10:10 AM
To: Belser, Evan
Subject: RE: Executed VW NOV

How did the 9am call go?

From: Belser, Evan
Sent: Friday, September 18, 2015 10:09 AM
To: Giles-AA, Cynthia; McCabe, Janet; Shinkman, Susan; Kelley, Rosemarie; Brooks, Phillip; Werner, Jacqueline; Orehowsky, Gregory; Kaul, Meetu; Grundler, Christopher; Bunker, Byron; Wehrly, Linc; Conger, Nick; Senn, John; Birgfeld, Erin; Millett, John
Subject: Executed VW NOV

Please find attached the final, executed NOV for VW. This is ready for web posting and public dissemination according to our plans.

Big thanks to Meetu Kaul, lead author on this. Thank you everyone for your invaluable input.

Evan

Evan Belser

Chief, Mobile Source Enforcement Branch, Air Enforcement Division

National Coordinator for Administrative Litigation, Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

202-564-6850

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: DC-WJCS-1109-M@epa.gov
Sent: Fri 9/18/2015 2:26:31 PM
Subject: CHRON VW NOV
image2015-09-18-102631.pdf

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_023953

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

VW FOIA, EPA 06/20/2017 2017-FFP_023954

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

VW FOIA, EPA 06/20/2017 2017-FFP_023956

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_023957

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_023958

To: Belser, Evan[Belser.Evan@epa.gov]
From: Grundler, Christopher
Sent: Fri 9/18/2015 2:35:29 PM
Subject: RE: Executed VW NOV

thanks

From: Belser, Evan
Sent: Friday, September 18, 2015 10:25 AM
To: Grundler, Christopher
Cc: Brooks, Phillip
Subject: RE: Executed VW NOV

Ex. 7

From: Grundler, Christopher
Sent: Friday, September 18, 2015 10:10 AM
To: Belser, Evan
Subject: RE: Executed VW NOV

How did the 9am call go?

From: Belser, Evan
Sent: Friday, September 18, 2015 10:09 AM
To: Giles-AA, Cynthia; McCabe, Janet; Shinkman, Susan; Kelley, Rosemarie; Brooks, Phillip; Werner, Jacqueline; Orehowsky, Gregory; Kaul, Meetu; Grundler, Christopher; Bunker, Byron; Wehrly, Linc; Conger, Nick; Senn, John; Birgfeld, Erin; Millett, John
Subject: Executed VW NOV

Please find attached the final, executed NOV for VW. This is ready for web posting and public dissemination according to our plans.

Big thanks to Meetu Kaul, lead author on this. Thank you everyone for your invaluable input.

Evan

Evan Belser

Chief, Mobile Source Enforcement Branch, Air Enforcement Division

National Coordinator for Administrative Litigation, Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

United States Environmental Protection Agency

202-564-6850

To: Belser, Evan[Belser.Evan@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]
From: Shinkman, Susan
Sent: Fri 9/18/2015 2:39:31 PM
Subject: Re: Executed VW NOV

Good to see that this is done. I am sure the last couple days have been intense. But, it looks clear and complete even from a distance. Please send me the press release when it goes out.

Thanks for all the hard work. I hope this weekend is quieter and easier for everyone.

Bon jour,

Susan

Sent from my iPhone

On Sep 18, 2015, at 4:08 PM, Belser, Evan <Belser.Evan@epa.gov> wrote:

> Please find attached the final, executed NOV for VW. This is ready for web posting and public dissemination according to our plans.
>
> Big thanks to Meetu Kaul, lead author on this. Thank you everyone for your invaluable input.
>
> Evan
>
> Evan Belser
>
> *Chief*, Mobile Source Enforcement Branch, Air Enforcement Division
>
> *National Coordinator for Administrative Litigation*, Office of Civil Enforcement
>
> Office of Enforcement and Compliance Assurance
>
> United States Environmental Protection Agency

202-564-6850

<VW NOV Final Executed 09-18-15.pdf>

From: Belser, Evan
Location: Non-Responsive Participant Code Non-Responsive
Importance: Normal
Subject: HOLD for EPA-ARB Civil Team Coordination on VW matter
Start Date/Time: Fri 9/18/2015 7:00:00 PM
End Date/Time: Fri 9/18/2015 8:00:00 PM

From: Ex. 4 - CBI
Location: Non-Responsive
Importance: Normal
Subject: Ex. 4, 7 Volkswagen
Start Date/Time:
End Date/Time: Ex. 7

;
Hi Meetu and Evan – I wanted to get something on the calendar to kick this off. If there are urgent needs, feel free to propose a new time or try me directly at my desk. I'm in all day Monday Ex. 7 I'll be in and out of my office today Ex. 7 .

Ex. 7

Ex. 7

Call-In Number: Non-Responsive
Participant Code:

Ex. 4 - CBI

Eastern Research Group, Inc. (ERG)
14555 Avion Parkway Suite 200
Chantilly, VA 20151

Ex. 4 - CBI

From: Ex. 7
Location: Non-Responsive
Importance: Normal
Subject: TD87 - Volkswagen
Start Date/Time: Mon 9/21/2015 6:00:00 PM
End Date/Time: Mon 9/21/2015 7:00:00 PM

;
Hi Meetu and Evan – I wanted to get something on the calendar to kick this off. If there are urgent needs, feel free to propose a new time or try me directly at my desk. I'm in all day Monday (9/17). I'll be

Ex. 7

Ex. 7

To: Ex. 7 @arb.ca.gov]
From: Brooks, Phillip
Sent: Fri 9/18/2015 3:21:09 PM
Subject: FW: Notice of Violation
VW NOV Final Executed 09-18-15.pdf

See below.

From: Kaul, Meetu
Sent: Friday, September 18, 2015 10:17 AM
To: Geanacopoulos.David@vw.com; Ex. 7 @vw.com
Cc: Brooks, Phillip; Werner, Jacqueline; Belser, Evan; stuart.drake@kirkland.com
Subject: Notice of Violation

Mr. Geanacopoulous and Ex. 7 ,

Per your conversation this morning with Mr. Brooks and others, attached please find EPA's Notice of Violation issued today.

Please contact me with any questions.

Regards,

Meetu Kaul

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472

Fax: 202-564-0069
Email: kaul.meetu@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_023968

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

VW FOIA, EPA 06/20/2017 2017-FFP_023969

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

VW FOIA, EPA 06/20/2017 2017-FFP_023971

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_023972

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_023973

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Ex. 7 @ARB
Sent: Fri 9/18/2015 3:30:33 PM
Subject: RE: Notice of Violation

Thanks.

Ex. 7

Ex. 7

California Air Resources Board

Ex. 7

Ex. 7 @arb.ca.gov

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Friday, September 18, 2015 8:21 AM
To: Ex. 7 @ARB
Subject: FW: Notice of Violation

See below.

From: Kaul, Meetu
Sent: Friday, September 18, 2015 10:17 AM
To: Ex. 7 vw.com; Ex. 7 @vw.com
Cc: Brooks, Phillip; Werner, Jacqueline; Belser, Evan; stuart.drake@kirkland.com
Subject: Notice of Violation

Mr. Ex. 7 and Ex. 7

Per your conversation this morning with Mr. Brooks and others, attached please find EPA's Notice of Violation issued today.

Please contact me with any questions.

Regards,

Meetu Kaul

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Washington, Debra
Sent: Fri 9/18/2015 3:45:16 PM
Subject: FYI - Request Certified Mail for Ex. 7
Ex. 7 Volkswagen Group of America.pdf

Heads Up

Just FYI regarding your request for certified mail to be sent out today.

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Ex. 7

Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

[redacted]
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and [redacted]

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_023979

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
Cc: Rosenberg, Julie[Rosenberg.Julie@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Brooks, Phillip
Sent: Fri 9/18/2015 3:56:05 PM
Subject: Re: VW CAA Violation - question fro U.S. Embassy Berlin

This is the web link.

http://www3.epa.gov/otaq/cert/violations.htm

Sent from my iPhone

On Sep 18, 2015, at 11:54 AM, Orehowsky, Gregory <Orehowsky.Gregory@epa.gov> wrote:

Julie:

After 7 months here, I am not sure how to handle this question but I am copying my management chain here so they can be aware and answer.

Greg

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

From: Rosenberg, Julie
Sent: Friday, September 18, 2015 11:46 AM
To: Orehowsky, Gregory

Subject: FW: VW CAA Violation - info needed?

Hi Greg, Emma is on my staff but on detail to the US Embassy in Berlin. Do you know if there is anything shareable on this, or where she could go to learn more? This is way out of my lane. Cheers, Julie

From: Zinsmeister, Emma L [mailto:ZinsmeisterEL@state.gov]
Sent: Friday, September 18, 2015 11:34 AM
To: Rosenberg, Julie
Subject: VW CAA Violation - info needed?

Julie –

My supervisor here just asked me about a violation of the Clean Air Act by Volkswagen. It sounds like EPA is issuing a notice or fine sometime today. Do you know anyone who might be able to provide more information? (I can only find online info about a fine dating back to 2005.) Folks here are interested in understanding the nature of the violation and if this type of action by EPA is common or a significant issue. I am heading out of the office for the weekend, but hopefully there will be more information I can share on Monday.

Emma Zinsmeister, MPH

Science Fellow

U.S. Embassy Berlin, Germany

+49 30-8305 2405

ZinsmeisterEL@state.gov

This email is UNCLASSIFIED.

To: Drew Kodjak[drew@theicct.org]
From: Bunker, Byron
Sent: Fri 9/18/2015 3:58:34 PM
Subject: VW Announcement

Hi Drew,

Our website is live. http://www3.epa.gov/otaq/cert/violations.htm

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

To: Brooks, Phillip[Brooks.Phillip@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Rosenberg, Julie
Sent: Fri 9/18/2015 3:59:17 PM
Subject: RE: VW CAA Violation - question fro U.S. Embassy Berlin

Thanks much.

From: Brooks, Phillip
Sent: Friday, September 18, 2015 11:56 AM
To: Orehowsky, Gregory
Cc: Rosenberg, Julie; Belser, Evan; Werner, Jacqueline; Kaul, Meetu
Subject: Re: VW CAA Violation - question fro U.S. Embassy Berlin

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http://www3.epa.gov/otaq/cert/violations.htm

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Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

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Sent: Friday, September 18, 2015 11:34 AM
To: Rosenberg, Julie
Subject: VW CAA Violation - info needed?

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Emma Zinsmeister, MPH

Science Fellow

U.S. Embassy Berlin, Germany

+49 30-8305 2405

ZinsmeisterEL@state.gov

This email is UNCLASSIFIED.

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: emailthis@ms3.lga2.nytimes.com
Sent: Fri 9/18/2015 4:12:26 PM
Subject: NYTimes.com: Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

Sent by jim.lofton12@gmail.com:

Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

By CORAL DAVENPORT

The Environmental Protection Agency issued the company a notice of violation, accusing it of breaking the law by installing software known as a "defeat device" in 4-cylinder Volkswagen and Audi vehicles.

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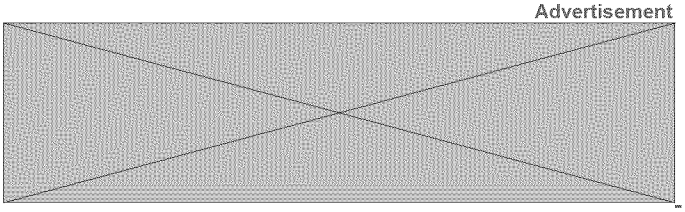

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To: gregory.thompson@mail.wvu.edu[gregory.thompson@mail.wvu.edu]
From: Bunker, Byron
Sent: Fri 9/18/2015 4:13:38 PM
Subject: RE: WVU Testing of LD Diesels - EPA Announcement

The following links will take you to our announcement.

http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/dfc8e33b5ab162b985257ec40(

http://www3.epa.gov/otaq/cert/violations.htm

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Bunker, Byron
Sent: Friday, September 18, 2015 11:55 AM
To: 'gregory.thompson@mail.wvu.edu'

Subject: WVU Testing of LD Diesels - EPA Announcement

Dear Dr. Thompson,

I wanted to make you aware that EPA and CARB today are announcing an investigation into Volkswagen regarding the performance of light duty diesel vehicles coming in part from the research your team conducted. If you have a few minutes today, I would like to give you a call to discuss.

Please let me know the best way and time to reach out to you.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

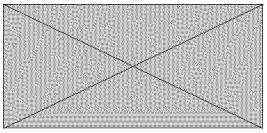
Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Environmental Law360
Sent: Fri 9/18/2015 4:27:37 PM
Subject: BREAKING: EPA Says Volkswagen Cars Flouted Emissions Limits



ENVIRONMENTAL

Friday, September 18, 2015

BREAKING: EPA Says Volkswagen Cars Flouted Emissions Limits

The U.S. Environmental Protection Agency on Friday dinged German automotive giant Volkswagen AG for allegedly selling diesel cars equipped with software designed to evade federal nitrogen oxide emissions standards in violation of the Clean Air Act.

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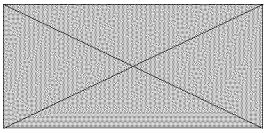
Law360 | Portfolio Media, Inc, 860 Broadway, New York, New York 10003

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Environmental Law360
Sent: Fri 9/18/2015 4:27:41 PM
Subject: BREAKING: EPA Says Volkswagen Cars Flouted Emissions Limits



ENVIRONMENTAL

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To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Jim Lofton
Sent: Fri 9/18/2015 4:34:20 PM
Subject: Re: NYTimes.com: Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

Ex. 6

On Fri, Sep 18, 2015 at 12:23 PM, Brooks, Phillip <Brooks.Phillip@epa.gov> wrote:

Ex. 6

Sent from my iPhone

On Sep 18, 2015, at 12:13 PM, Ex. 6 <emailthis@ms3.lga2.nytimes.com> wrote:

Ex. 6

Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

http://nyti.ms/1inhGmI

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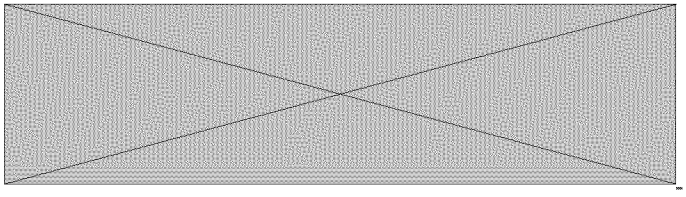

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To: Couroux,Stephane [NCR][Stephane.Couroux@ec.gc.ca]; Kirshenblatt,Morrie [NCR][Morrie.Kirshenblatt@ec.gc.ca]
From: Bunker, Byron
Sent: Fri 9/18/2015 4:38:50 PM
Subject: EPA VW announcement is now live

Hi Stephane and Morrie,

Our VW announcement is live. You can find it here.

http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/dfc8e33b5ab162b985257ec40

http://www3.epa.gov/otaq/cert/violations.htm

We didn't get any questions on Canadian vehicles during the press call.

Thanks for everything yesterday. I am sorry that I couldn't stay for the entire call. Those meetings are very important to me, and we truly appreciate our collaboration.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

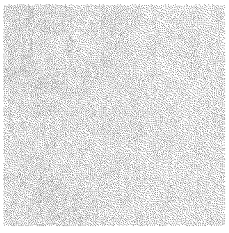
Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Fri 9/18/2015 4:45:20 PM
Subject: VW Defeat devices. Story in the NY Times by Noon Friday.
volkswagen-is-ordere.pdf



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Ex. 4 - CBI (Contractor)

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory Library

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Ann Arbor, MI 48105

Ex. 4 - CBI

Ex. 4 - CBI

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: EnergyGuardian
Sent: Fri 9/18/2015 4:52:23 PM
Subject: BREAKING NEWS: EPA says VW intentionally violates clean air standards

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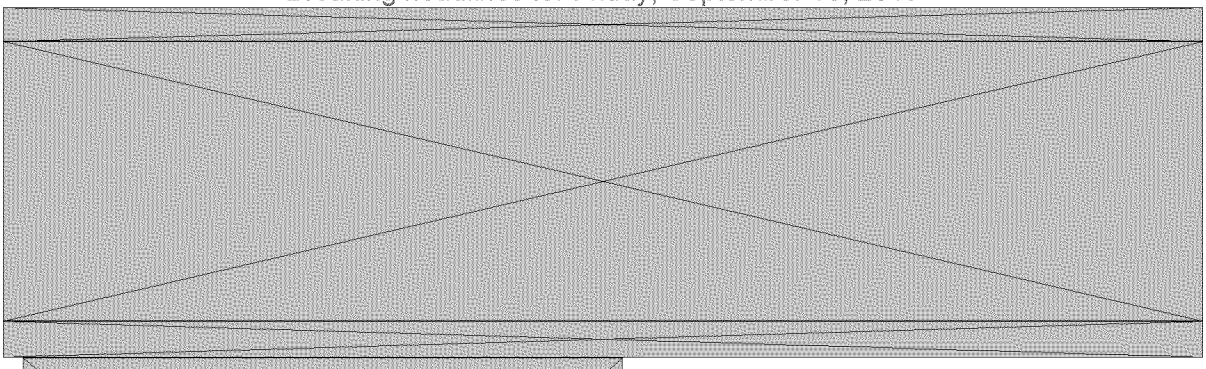

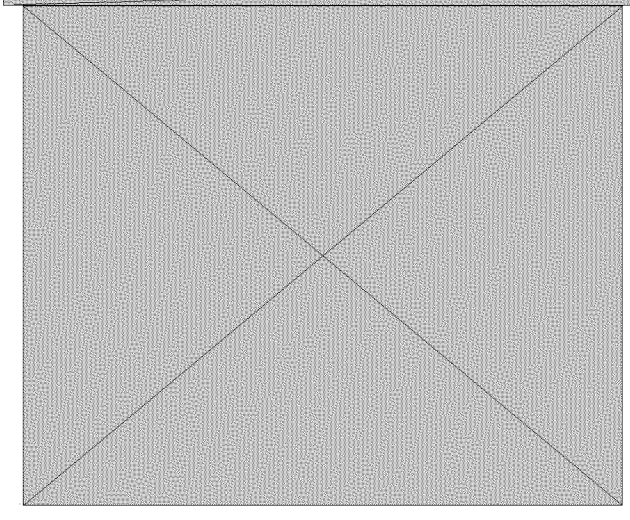

EPA says VW intentionally violates clean air standards

By Matthew Daly

WASHINGTON (AP) — The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that

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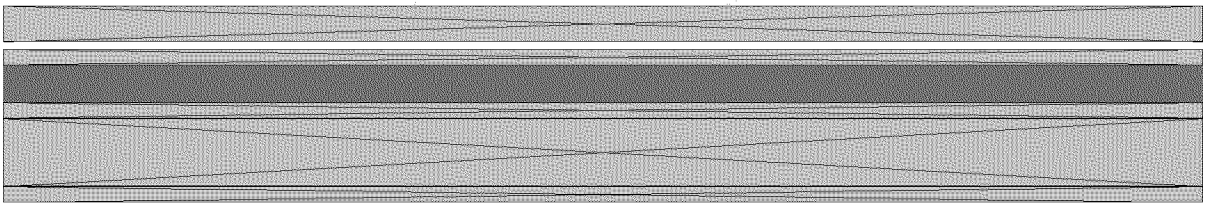
testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.



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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: EnergyGuardian
Sent: Fri 9/18/2015 4:52:47 PM
Subject: BREAKING NEWS: EPA says VW intentionally violates clean air standards

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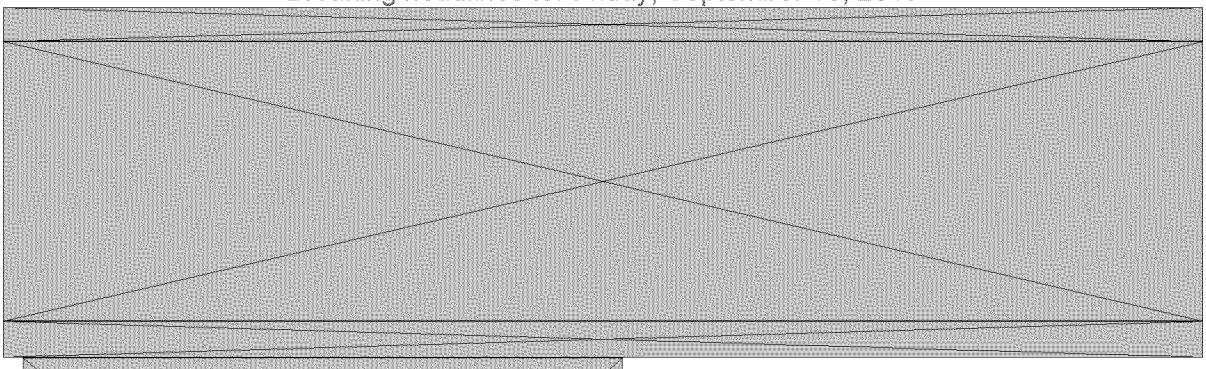

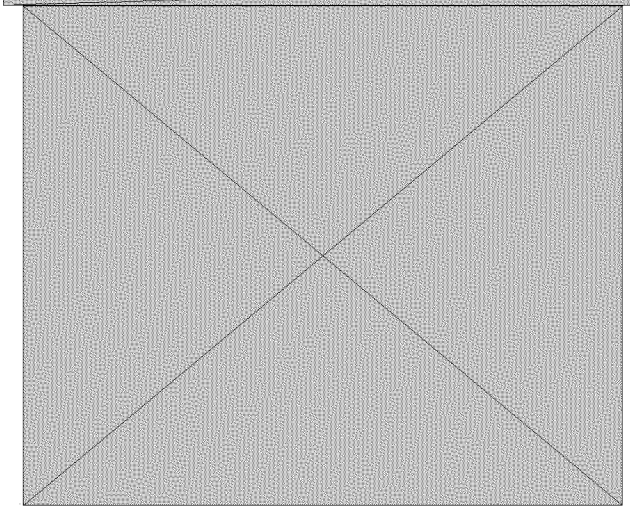

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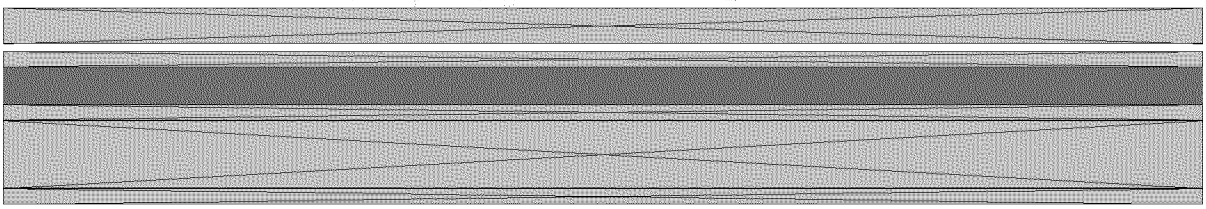

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To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Kaplan, Robert
Sent: Fri 9/18/2015 4:53:50 PM
Subject: Fwd: BREAKING NEWS: EPA says VW intentionally violates clean air standards

Sent from my iPhone

Begin forwarded message:

From: EnergyGuardian <energy@email.energyguardian.net>
Date: September 18, 2015 at 12:52:26 PM EDT
To: "kaplan.robert@epa.gov" <kaplan.robert@epa.gov>
Subject: BREAKING NEWS: EPA says VW intentionally violates clean air standards
Reply-To: EnergyGuardian <energy@washingtonguardian.net>

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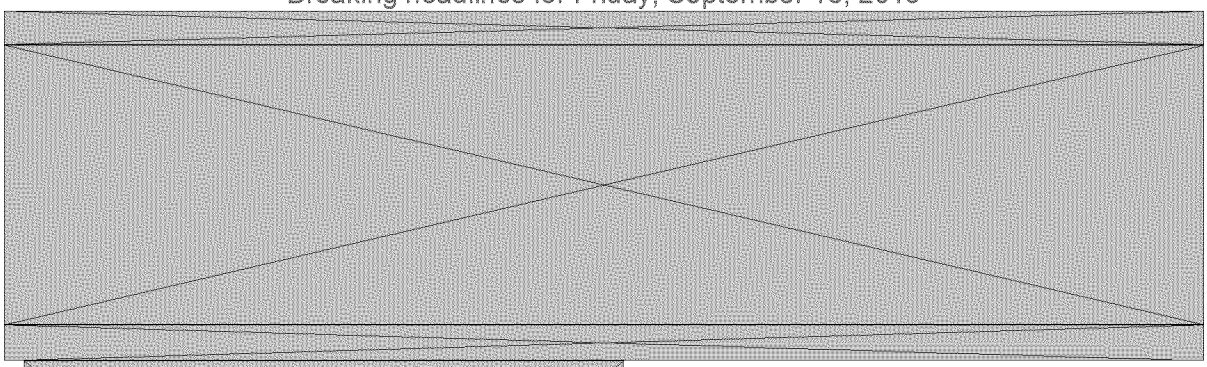

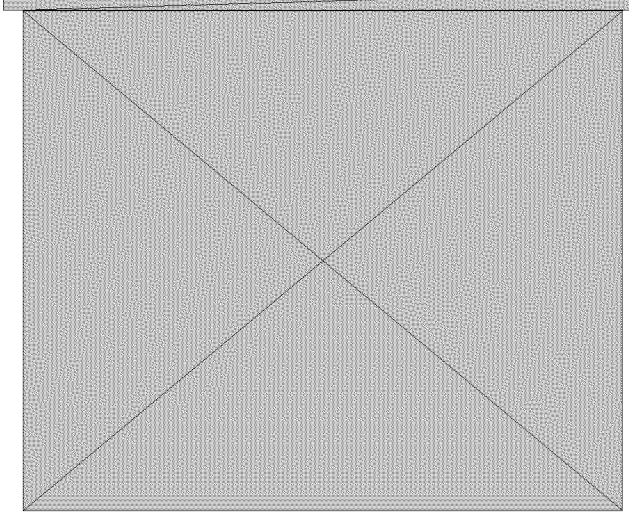

EPA says VW intentionally violates clean air standards

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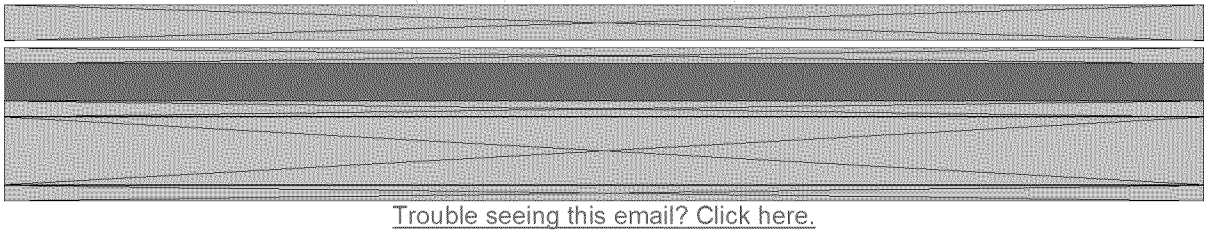
The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.



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To: Geanacopoulos, David[David.Geanacopoulos@vw.com]
From: Kaul, Meetu
Sent: Fri 9/18/2015 4:55:20 PM
Subject: RE: email address correction

My apologies. Thank you very much.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Geanacopoulos, David [mailto:David.Geanacopoulos@vw.com]
Sent: Friday, September 18, 2015 10:56 AM
To: Kaul, Meetu
Subject: email address correction

Hello, please use this email address: david.geanacopoulos@vw.com

Thank you and best regards,

David

David Geanacopoulos

Executive Vice President, General Counsel

Volkswagen Group of America, Inc.

2200 Ferdinand Porsche Drive

Herndon, Virginia 20171

703-364-7240

To: Ex. 6

Ex. 6

From: Grundler, Christopher
Sent: Fri 9/18/2015 4:58:47 PM
Subject: Google VW and EPA

Part of what I've been working on lately in case you are curious

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
Cc: Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Millett, John[Millett.John@epa.gov]
From: Birgfeld, Erin
Sent: Fri 9/18/2015 5:10:44 PM
Subject: FW: Volkswagen Clips 9/18/2015

The clips so far!

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:10 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit Free Press:

http://www.freep.com/story/money/cars/2015/09/18/epa-volkswagen-used-software-skirt-emissions-rules/72399372/

EPA: Volkswagen used software to skirt emissions rules

By Greg Gardner

The U.S. Environmental Protection Agency and California are accusing Volkswagen of violating the Clean Air Act by using software that allows hundred of thousands of VW and Audi diesel-powered cars to get around emission standards.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for enforcement and compliance assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The agency's notice of violation covers about 482,000 diesel cars sold between 2009 and 2015 model years.

Affected diesel models include:

Jetta (model years 2009 – 2015)

Beetle (model years 2009 – 2015)

Audi A3 (model years 2009 – 2015)

Golf (model years 2009 – 2015)

Passat (model years 2014-2015)

California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board (CARB) have both initiated investigations based on Volkswagen's alleged actions.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said CARB executive officer Richard Corey. "Our goal is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The federal and California regulators say Volkswagen used a sophisticated software algorithm on certain Volkswagen vehicles that detects when the car is undergoing official emissions testing and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations.

As a result the cars met emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the permissible standard. The

software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

Corey said testing groups in Europe found information that indicated Volkswagen may have manipulated its emission tests and told California regulators about their suspicions.

NOx pollution contributes to nitrogen dioxide, ground-level ozone and fine particulate matter. Exposure to these pollutants has been linked with a range of serious health effects, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, elderly people and those with pre-existing respiratory disease are particularly at risk for health effects of these pollutants.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified. By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, Volkswagen violated two important provisions of the Clean Air Act.

EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization. The researchers raised questions about emissions levels, and the agencies began further investigations into the issue. In September, after EPA and CARB demanded an explanation for the emission problems, Volkswagen admitted that the cars contained defeat devices.

VW may be liable for civil penalties of up to $37,500 per vehicle found to be violating the standard, or potentially more than $18 billion.

It is incumbent upon Volkswagen to initiate the process that will fix the cars' emissions systems. Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of

cars of these models and years do not need to take any action at this time.

Wired:

http://www.wired.com/2015/09/epa-accuses-volkswagen-cheating-emissions-testing-482000-cars/

EPA ACCUSES VOLKSWAGEN OF CHEATING EMISSIONS TESTING ON 482,000 CARS

Alex Davies

THE EPA IS accusing Volkswagen of illegally using software to cheat emissions standards, allowing the German automaker to sell half a million cars that produce smog at 40 times the legal limit.

In a notice of violation of the Clean Air Act sent to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc today, the EPA said diesel-powered VW cars used a "defeat device," a kind of "a sophisticated software algorithm [that] detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations."

The accusation applies to 482,000 diesel-powered, four-cyclinder Jetta, Beetle, Audi A3, Golf, and Passat cars sold between 2008 and 2015 in the US. The news comes as the Frankfurt motor show, one of the biggest events of the year for the automaker, opens to the press. VW will be required to fix the problem, at no cost to car owners.

The Week:

http://www.theweek.com/speedreads/578080/epa-catches-volkswagen-blatantly-cheating-smog-tests

EPA catches Volkswagen blatantly cheating on smog tests

Jeva Lange

Almost half a million Volkswagen cars, including recent diesel models of Jettas, Beetles, Audi A3s, Golfs, and Passats, may be recalled in an enormous crackdown on the German carmaker's alleged blatant circumvention of smog standards, The New York Times reports.

The Environmental Protection Agency has demanded that the cars be recalled, and specifically accused Volkswagen of installing software, called a "defeat device," in their cars that basically just lies about what a car's emissions are during tests:

The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said. [The New York Times]

Car emissions contain nitrogen oxide, which creates smog, as well as pollutants that cause asthma.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:56 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

LA Times:

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Volkswagen is accused of sidestepping emissions rules, 'cheating' pollution tests

By JERRY HIRSCH

Federal and California environmental regulators accused Volkswagen of using software that "cheats" pollution testing in nearly 500,000 recent model VWs and Audis by circumventing emission standards in its diesel cars.

The German automaker will eventually have to recall all of the vehicles and change the emissions systems at its own expense, regulators said. Additionally it could face a fine of about $18 billion, or $35,500 per car, federal environmental officials said.

The Environmental Protection Agency on Friday issued the German automaker a "notice of violation" of the Clean Air Act for both VW models and the company's Audi luxury brand. It covers models equipped with four-cylinder diesel engines. The California Air Resources Board issued a similar letter.

Volkswagen and Audi vehicles from model years 2009-2015 have the software, which uses an algorithm that detects when the vehicle is undergoing pollution tests and changes the way it performs from when it is being driven on the open road.

It "is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "EPA is committed to making sure that all automakers play by the same rules."

"We expected better from VW," Giles said.

Air Resources Board Executive Officer Richard Corey said the California agency wants to bring

the cars "into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

Volkswagen said it is cooperating with the investigation.

"We are unable to comment further at this time," the company said in a statement.

The affected diesel models include: Jetta (model years 2009 – 2015,) Beetle (model years 2009 – 2015,) Audi A3 (model years 2009 – 2015,) Golf (model years 2009 – 2015) and Passat (model years 2014-2015.)

International Business Times:

http://www.ibtimes.com/volkswagen-audi-recall-500000-cars-broke-environmental-rules-white-house-says-2104099

Volkswagen And Audi Recall: 500,000 Cars Broke Environmental Rules, White House Says

By Christopher Harress

The Obama administration Friday forced car manufacturer Volkswagen to recall nearly 500,000 cars after it was discovered the German automaker had fitted its vehicles with special technology that can beat environmental tests for reducing smog, according to a new report.

The recall, which was imposed after an investigation by the Environmental Protection Agency, is expected to affect four-cylinder Volkswagen and Audi cars that were manufactured between 2009 and 2015.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance, told the New York Times.

"Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:52 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit News:

http://www.detroitnews.com/story/business/autos/foreign/2015/09/18/epa-vw-diesel-vehicles-violated-emissions-rules/72401296/

EPA: 482K VW diesel vehicles violated emissions rules

David Shepardson

Washington — The Environmental Protection Agency and the state of California said Volkswagen AG violated federal law by allowing 482,000 diesel VW and Audi cars sold since 2009 to evade emissions requirements using sophisticated software.

The announcement is a big setback to the German automaker that has made diesel vehicles a big part of its U.S. strategy. VW could face fines or criminal prosecution and must immediately prevent those vehicles from being able to defeat emissions rules.

VW concealed facts but has now admitted wrongdoing, said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "We expected better from VW," she said.

The agencies allege that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air pollutants. California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board have initiated investigations based on Volkswagen's alleged actions.

EPA said the vehicles software "detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test." The vehicles include diesel Golf, Jetta, Sportwagen, Beetle and Audi A3 vehicles built from 2009-2015.

EPA said "the effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a 'defeat device,' as defined by the Clean Air Act."

NOx pollution contributes to nitrogen dioxide, ground-level ozone, and fine particulate matter. EPA said exposure has been linked to serious health issues, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. "Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, the elderly, and people with pre-existing respiratory disease are particularly at risk for health effects of these pollutants," EPA said.

This is the latest example of automakers not following the miles per gallon and emissions rules.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Giles. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to

investigate these very serious matters."

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said Air Resources Board Executive Officer Richard Corey. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The issue first came to the attention of the agencies in 2014 after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels, and the agencies began further investigations into the issue.

In September, after EPA and CARB demanded an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices, the agencies said.

EPA said VW must recall the vehicles. EPA said "owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

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AP (via ABC News):

http://abcnews.go.com/Politics/trump-candidates-criticize-donald-muslim-comments/story?id=33858500

EPA Says VW Intentionally Violates Clean Air Standards

By MATTHEW DALY, ASSOCIATED PRESS WASHINGTON — Sep 18, 2015, 12:42 PM ET

The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.

Bloomberg:

http://www.bloomberg.com/news/articles/2015-09-18/epa-says-volkswagon-software-circumvented-car-emissions-testing

EPA Says Volkswagen Circumvented Car Emissions Tests

Jeff Plungis

Volkswagen AG sold diesel cars with software that circumvented U.S. emissions standards for air pollution, the Environmental Protection Agency said.

The company sold Volkswagen and Audi brand cars from model years 2009-2015 that contained a "sophisticated software algorithm" that detects when the car is undergoing official emissions testing, and turns on full emissions control, the agency said. During normal driving times, the systems don't operate fully, regulators said.

The potential fine is $37,500 per vehicle and 482,000 autos are part of the case, yielding a potential fine of more than $18 billion, Cynthia Giles, EPA assistant administrator for enforcement and compliance, said on a phone call with reporters Friday.

California is also investigating the claims.

Volkswagen said in a statement it is cooperating with the investigation and unable to comment further.

Business Insider:

http://www.businessinsider.com/vw-told-to-recall-500000-cars-after-us-government-accuses-it-of-dodging-clean-air-standards-2015-9

VW told to recall 500,000 cars after US government accuses it of dodging clean air standards

Benjamin Zhang

The Environmental Protection Agency has ordered the recall of 500,000 Volkswagen cars.

According to Coral Davenport of the New York Times, the EPA accused VW of using hidden software — called a "defeat device" — to dodge clean air standard during emissions testing.

“Using a defeat device in cars to evade clean air standards is illegal and a threat to public health,” assistant administrator for the Office of Enforcement and Compliance Assurance said Cynthia Giles said in a statement.

“Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters.”

In response to the recall, Volkswagen issued the following statement to Business Insider.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time."

The recall affects 482,000 diesel powered cars sold in the US since 2008. They include:

Volkswagen Jetta TDI: 2009-20015

Volkswagen Beetle TDI: 2009-2015

Audi A3 TDI: 2009-2015

Volkswagen Golf TDI: 2009-2015

Volkswagen Passat TDI: 2014-2015

This story is developing. We will update when more information is available.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:42 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Examiner:

http://www.washingtonexaminer.com/epa-says-audi-vw-cheating-on-emissions/article/2572404

EPA says Audi, VW cheating on emissions

By JOHN SICILIANO

The Environmental Protection Agency and California regulators charged automakers Volkswagen and Audi on Friday with purposefully violating emission standards in their line of diesel cars.

EPA accused the automakers of using a device in their vehicles to get around the pollution rules. According to EPA, the device regulates emissions, but only turns on and works while emissions are being tested.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for the agency's enforcement office. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

Giles said VW was "concealing facts" about the devices. The vehicle models involved include the popular Jetta, Audi A-3, Passat and the iconic Beetle, and in model years 2009-2015. The violations cover 482,000 diesel passenger cars.

The EPA's announcement isn't a final decision, but is a clear sign that the EPA believes it has a case against the automakers, one that could lead to fines as large as $37,000 per vehicle. All together, the combined fines could pile up to $18 billion.

An EPA statement said "California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board ... have both initiated investigations based on Volkswagen's alleged actions."

"Working with US EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," the California board's CEO Richard Corey said. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

WPTZ:

http://www.wptz.com/money/epa-accuses-vw-of-cheating-on-emission-rules/35352250

EPA accuses VW of cheating on emission rules

Published 12:29 PM EDT Sep 18, 2015

NEW YORK (CNNMoney) —Diesel cars from Volkswagen and Audi cheated on clean air rules by including software that made the cars look cleaner than they actually were, according to federal and California regulators.

The regulators say that the software on the cars turned up the emission controls only when it could tell that the car was being tested.

"The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations," said the Environmental Protection Agency's notice to the company. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides at up to 40 times the standard."

There are nearly 500,000 of the diesel cars on U.S. roads. The models include the VW Jetta, the Beetle and the Golf from model years 2009 through 2015, the Passat from 2014-2015 as well as the Audi A3, model years 2009-2015. The luxury brand is owned by Volkswagen.

Owners of the affected cars do not face health risks according to the EPA and can to continue to drive or sell the cars. But the EPA says that VW will be responsible for fixing the problem.

Volkwagen did not immediately respond to a request for comment.

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City AM:

http://www.cityam.com/224676/volkswagen-told-recall-500000-vehicles-over-emissions

Volkswagen told to recall 500,000 vehicles over emissions

by Catherine Neilan

Volkswagen has been ordered to recall nearly half a million cars in the US by the Obama administration, which claims the German car group used software that was purposely designed to dodge environmental standards for reducing smog.

The US government's Environmental Protection Agency issued the company a notice of violation this afternoon, accusing Volkswagen of having installing a "defeat device" into its four-cylinder Volkswagen and Audi vehicles between 2009 and 2015, according to the New York Times.

The device is programmed to detect when the car is undergoing emissions test, during which time it will turn on its full emissions control systems. These controls are reportedly then turned off when the car is driving in "normal" situations, when the cars pollute more heavily than reported by Volkswagen, the EPA claims.

The government agency estimates that 482,000 diesel passenger vehicles are affected.

Volkswagen could not be contacted at the time of publication.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:33 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Times:

http://www.washingtontimes.com/news/2015/sep/18/epa-volkswagen-used-software-cheat-emissions-tests/

EPA: Volkswagen used 'sophisticated software' to cheat emissions tests

By Ben Wolfgang - The Washington Times - Friday, September 18, 2015

The Obama administration on Friday accused Volkswagen of using a "sophisticated software algorithm" to cheat on emissions testing and mask the fact that some models emit too much harmful pollution.

Some Volkswagen cars from model years 2009 to 2015, the Environmental Protection Agency said, include software that can detect when they're undergoing emissions testing. Full emissions controls were activated only during testing and then automatically shut down during normal operation, the agency charged.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

During normal operation, the "defeat device" allowed Volkswagen cars to emit nitrogen oxides at up to 40 times the federal threshold as laid out in the Clean Air Act.

The EPA has issued "a notice of violation" to the automaker, and the state of California has launched its own investigation into the matter. Volkswagen could face civil penalties for the violations, the agency said.

The allegations apply to about 482,000 diesel passenger cars sold since 2008, including Jettas, Beetles, Audi A3s, Golfs and other models.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:26 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

USA Today:

http://www.usatoday.com/story/money/cars/2015/09/18/epa-accuses-volkswagen-audi-evading-emission-laws/72400018/

EPA accuses Volkswagen, Audi of evading emission laws

Nathan Bomey, USA TODAY 12:12 p.m. EDT September 18, 2015

The German automaker adopted a "defeat device" to trick regulators, the EPA said.

The Environmental Protection Agency on Friday accused Volkswagen of installing software on certain cars in the U.S. to evade federal emission regulations, potentially exposing people to harmful pollutants.

The German automaker adopted what the EPA called a "defeat device" to trick U.S. regulators into believing that its cars met Clean Air Act standards, the federal agency said in a statement.

The agency said 482,000 cars violated federal standards, including four-cylinder Volkswagen cars from 2009-15 and Audi diesel cars from the same period. They included the Volkswagen Jetta, Beetle, Golf and Passat, and the Audi A3.

Volkswagen, whose brands include the luxury Audi lineup, may face fines or other penalties, the EPA said.

The cars are still safe to drive, the EPA said, and owners do not need to take immediate action. But the agency will require Volkswagen to fix the cars for free.

Newsweek:

http://www.newsweek.com/epa-volkswagen-software-cheat-clean-air-rules-373869

EPA: Volkswagen Used Software in Cars to Cheat on Clean Air Rules

BY ZOË SCHLANGER 9/18/15 AT 12:14 PM

A U.S. Environmental Protection Agency investigation has concluded that for years Volkswagen has been installing software in its vehicles that circumvents federal emissions standards for air pollution, the agency announced Friday.

EPA alleges that Volkswagen installed a "sophisticated software algorithm on certain Volkswagen vehicles" that could detect when the car was being tested for emissions. The software would turn full emissions controls on only during the official test. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," EPA said in a press release. They called the software a "defeat device," deliberately installed to evade the Clean Air Act standards.

This "defeat device" was found in several car models, from 2009 models up to 2015 models, according to EPA:

Jetta (Model Years 2009 – 2015)

Beetle (Model Years 2009 – 2015)

Audi A3 (Model Years 2009 – 2015)

Golf (Model Years 2009 – 2015)

Passat (Model Years 2014-2015)

In total, this includes about 482,000 passenger cars.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, EPA's Assistant Administrator for the Office of Enforcement and Compliance Assurance, said in a statement emailed Friday. The agency worked with California regulators to investigate the automobile manufacturer and issue a notice of violation.

"Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," California Air Resources Board Executive Officer Richard Corey said in the statement.

Volkswagen has yet to respond publicly to the EPA allegations. Newsweek has reached out to the company for comment, and we will update if they respond.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:20 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: Volkswagen Clips 9/18/2015

NY Times:

http://www.nytimes.com/2015/09/19/business/volkswagen-is-ordered-to-recall-nearly-500000-vehicles-over-emissions-software.html?_r=0

Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

By CORAL DAVENPORT SEPT. 18, 2015

WASHINGTON — The Obama administration on Friday ordered Volkswagen to recall nearly a half million cars from the road, saying the German automaker used software intentionally designed to circumvent environmental standards for reducing smog.

The Environmental Protection Agency issued the company a notice of violation and accused the company of breaking the law by installing software known as a "defeat device" in 4-cylinder Volkswagen and Audi vehicles from model years 2009-15. The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

The software was designed to conceal the cars' emissions of the pollutant nitrogen oxide, which contributes to the creation of ozone and smog. The pollutants are linked to a range of health problems, including asthma attacks and other respiratory diseases.

The state of California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

The allegations cover roughly 482,000 diesel passenger cars sold in the United States since 2009.

Affected diesel models include the Volkswagen Jetta (model years 2009-15), Volkswagen Beetle (model years 2009–15), Audi A3 (model years 2009–15), Volkswagen Golf (model years 2009–15) and Volkswagen Passat (model years 2014-15).

The notice of violation is part of a broader, more aggressive enforcement effort by federal environmental regulators on the auto industry. Analysts said it was meant to send a clear message to automakers that they will be harshly treated for compromising federal rules.

It follows a November 2014 announcement of the administration's largest-ever penalty for a violation of the Clean Air Act, in which the government fined the Korean automakers Hyundai Motor and Kia Motors a combined $300 million as part of a settlement for overstating vehicle fuel-economy standards on 1.2 million cars.

"They want to make it clear that they're going to crack down on cheaters," said Frank O'Donnell, president of the environmental advocacy group Clean Air Watch. "They're cheating not only car buyers but the breathing public. They want to lay down the law, enforce the law, and show they're not going to tolerate cheaters. The laws and regulation are only as good as the enforcement."

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: E&E Publishing
Sent: Fri 9/18/2015 5:22:36 PM
Subject: September 18 -- Greenwire is ready

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Volkswagen accused of using crafty software to dodge rules

Volkswagen has been manufacturing cars with "sophisticated software" programmed to skirt clean air rules by only turning on full pollution controls when the cars are being tested, government regulators alleged today.

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: E&E Publishing
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Subject: September 18 -- Greenwire is ready

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To: Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]
From: Kaul, Meetu
Sent: Fri 9/18/2015 5:33:19 PM
Subject: FW: email address correction

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Geanacopoulos, David [mailto:David.Geanacopoulos@vw.com]
Sent: Friday, September 18, 2015 10:56 AM
To: Kaul, Meetu
Subject: email address correction

Hello, please use this email address: david.geanacopoulos@vw.com

Thank you and best regards,

David

David Geanacopoulos

Executive Vice President, General Counsel

Volkswagen Group of America, Inc.

2200 Ferdinand Porsche Drive

Herndon, Virginia 20171

703-364-7240

To: Patulski, Meg[patulski.meg@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Kapichak, Rudolph[kapichak.rudolph@epa.gov]
From: Bunker, Byron
Sent: Fri 9/18/2015 5:43:44 PM
Subject: FW: Volkswagen Clips 9/18/2015

I just realized that you might not have any of the background to understand where the I/M question is coming from. See below.

From: Birgfeld, Erin
Sent: Friday, September 18, 2015 1:11 PM
To: Grundler, Christopher; Bunker, Byron
Cc: Hengst, Benjamin; Millett, John
Subject: FW: Volkswagen Clips 9/18/2015

The clips so far!

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:10 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit Free Press:

http://www.freep.com/story/money/cars/2015/09/18/epa-volkswagen-used-software-skirt-emissions-rules/72399372/

EPA: Volkswagen used software to skirt emissions rules

By Greg Gardner

The U.S. Environmental Protection Agency and California are accusing Volkswagen of violating the Clean Air Act by using software that allows hundred of thousands of VW and Audi diesel-powered cars to get around emission standards.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for enforcement and compliance assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The agency's notice of violation covers about 482,000 diesel cars sold between 2009 and 2015 model years.

Affected diesel models include:

Jetta (model years 2009 – 2015)

Beetle (model years 2009 – 2015)

Audi A3 (model years 2009 – 2015)

Golf (model years 2009 – 2015)

Passat (model years 2014-2015)

California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board (CARB) have both initiated investigations based on Volkswagen's alleged actions.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said CARB executive officer Richard Corey. "Our goal is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules,

and to take appropriate further action."

The federal and California regulators say Volkswagen used a sophisticated software algorithm on certain Volkswagen vehicles that detects when the car is undergoing official emissions testing and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations.

As a result the cars met emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the permissible standard. The software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

Corey said testing groups in Europe found information that indicated Volkswagen may have manipulated its emission tests and told California regulators about their suspicions.

NOx pollution contributes to nitrogen dioxide, ground-level ozone and fine particulate matter. Exposure to these pollutants has been linked with a range of serious health effects, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, elderly people and those with pre-existing respiratory disease are particularly at risk for health effects of these pollutants.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified. By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, Volkswagen violated two important provisions of the Clean Air Act.

EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization. The researchers raised questions about emissions levels, and the agencies began further investigations into the issue. In September, after EPA and CARB

demanded an explanation for the emission problems, Volkswagen admitted that the cars contained defeat devices.

VW may be liable for civil penalties of up to $37,500 per vehicle found to be violating the standard, or potentially more than $18 billion.

It is incumbent upon Volkswagen to initiate the process that will fix the cars' emissions systems. Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time.

Wired:

http://www.wired.com/2015/09/epa-accuses-volkswagen-cheating-emissions-testing-482000-cars/

EPA ACCUSES VOLKSWAGEN OF CHEATING EMISSIONS TESTING ON 482,000 CARS

Alex Davies

THE EPA IS accusing Volkswagen of illegally using software to cheat emissions standards, allowing the German automaker to sell half a million cars that produce smog at 40 times the legal limit.

In a notice of violation of the Clean Air Act sent to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc today, the EPA said diesel-powered VW cars used a "defeat device," a kind of "a sophisticated software algorithm [that] detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations."

The accusation applies to 482,000 diesel-powered, four-cyclinder Jetta, Beetle, Audi A3, Golf, and Passat cars sold between 2008 and 2015 in the US. The news comes as the Frankfurt motor show, one of the biggest events of the year for the automaker, opens to the press. VW will be required to fix the problem, at no cost to car owners.

The Week:

http://www.theweek.com/speedreads/578080/epa-catches-volkswagen-blatantly-cheating-smog-tests

EPA catches Volkswagen blatantly cheating on smog tests

Jeva Lange

Almost half a million Volkswagen cars, including recent diesel models of Jettas, Beetles, Audi A3s, Golfs, and Passats, may be recalled in an enormous crackdown on the German carmaker's alleged blatant circumvention of smog standards, The New York Times reports.

The Environmental Protection Agency has demanded that the cars be recalled, and specifically accused Volkswagen of installing software, called a "defeat device," in their cars that basically just lies about what a car's emissions are during tests:

The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said. [The New York Times]

Car emissions contain nitrogen oxide, which creates smog, as well as pollutants that cause asthma.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:56 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

LA Times:

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Volkswagen is accused of sidestepping emissions rules, 'cheating' pollution tests

By JERRY HIRSCH

Federal and California environmental regulators accused Volkswagen of using software that "cheats" pollution testing in nearly 500,000 recent model VWs and Audis by circumventing emission standards in its diesel cars.

The German automaker will eventually have to recall all of the vehicles and change the emissions systems at its own expense, regulators said. Additionally it could face a fine of about $18 billion, or $35,500 per car, federal environmental officials said.

The Environmental Protection Agency on Friday issued the German automaker a "notice of violation" of the Clean Air Act for both VW models and the company's Audi luxury brand. It covers models equipped with four-cylinder diesel engines. The California Air Resources Board issued a similar letter.

Volkswagen and Audi vehicles from model years 2009-2015 have the software, which uses an algorithm that detects when the vehicle is undergoing pollution tests and changes the way it performs from when it is being driven on the open road.

It "is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "EPA is committed to making sure that all automakers play by the same rules."

"We expected better from VW," Giles said.

Air Resources Board Executive Officer Richard Corey said the California agency wants to bring the cars "into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

Volkswagen said it is cooperating with the investigation.

"We are unable to comment further at this time," the company said in a statement.

The affected diesel models include: Jetta (model years 2009 – 2015,) Beetle (model years 2009 – 2015,) Audi A3 (model years 2009 – 2015,) Golf (model years 2009 – 2015) and Passat (model years 2014-2015.)

International Business Times:

http://www.ibtimes.com/volkswagen-audi-recall-500000-cars-broke-environmental-rules-white-house-says-2104099

Volkswagen And Audi Recall: 500,000 Cars Broke Environmental Rules, White House Says

By Christopher Harress

The Obama administration Friday forced car manufacturer Volkswagen to recall nearly 500,000 cars after it was discovered the German automaker had fitted its vehicles with special technology that can beat environmental tests for reducing smog, according to a new report.

The recall, which was imposed after an investigation by the Environmental Protection Agency, is expected to affect four-cylinder Volkswagen and Audi cars that were manufactured between 2009 and 2015.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance, told the New York Times.

"Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:52 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit News:

http://www.detroitnews.com/story/business/autos/foreign/2015/09/18/epa-vw-diesel-vehicles-violated-emissions-rules/72401296/

EPA: 482K VW diesel vehicles violated emissions rules

David Shepardson

Washington — The Environmental Protection Agency and the state of California said Volkswagen AG violated federal law by allowing 482,000 diesel VW and Audi cars sold since 2009 to evade emissions requirements using sophisticated software.

The announcement is a big setback to the German automaker that has made diesel vehicles a big part of its U.S. strategy. VW could face fines or criminal prosecution and must immediately prevent those vehicles from being able to defeat emissions rules.

VW concealed facts but has now admitted wrongdoing, said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "We expected better from VW," she said.

The agencies allege that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air pollutants. California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board have initiated investigations based on Volkswagen's alleged actions.

EPA said the vehicles software "detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test." The vehicles include diesel Golf, Jetta, Sportwagen, Beetle and Audi A3 vehicles built from 2009-2015.

EPA said "the effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a 'defeat device,' as defined by the Clean Air Act."

NOx pollution contributes to nitrogen dioxide, ground-level ozone, and fine particulate matter. EPA said exposure has been linked to serious health issues, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. "Exposure to ozone and particulate matter have also been associated with premature death due to

respiratory-related or cardiovascular-related effects. Children, the elderly, and people with pre-existing respiratory disease are particularly at risk for health effects of these pollutants," EPA said.

This is the latest example of automakers not following the miles per gallon and emissions rules.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Giles. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said Air Resources Board Executive Officer Richard Corey. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The issue first came to the attention of the agencies in 2014 after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels, and the agencies began further investigations into the issue.

In September, after EPA and CARB demanded an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices, the agencies said.

EPA said VW must recall the vehicles. EPA said "owners should know that although these

vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

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AP (via ABC News):

http://abcnews.go.com/Politics/trump-candidates-criticize-donald-muslim-comments/story?id=33858500

EPA Says VW Intentionally Violates Clean Air Standards

By MATTHEW DALY, ASSOCIATED PRESS WASHINGTON — Sep 18, 2015, 12:42 PM ET

The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.

Bloomberg:

http://www.bloomberg.com/news/articles/2015-09-18/epa-says-volkswagon-software-circumvented-car-emissions-testing

EPA Says Volkswagen Circumvented Car Emissions Tests

Jeff Plungis

Volkswagen AG sold diesel cars with software that circumvented U.S. emissions standards for air pollution, the Environmental Protection Agency said.

The company sold Volkswagen and Audi brand cars from model years 2009-2015 that contained a "sophisticated software algorithm" that detects when the car is undergoing official emissions testing, and turns on full emissions control, the agency said. During normal driving times, the systems don't operate fully, regulators said.

The potential fine is $37,500 per vehicle and 482,000 autos are part of the case, yielding a potential fine of more than $18 billion, Cynthia Giles, EPA assistant administrator for enforcement and compliance, said on a phone call with reporters Friday.

California is also investigating the claims.

Volkswagen said in a statement it is cooperating with the investigation and unable to comment further.

Business Insider:

http://www.businessinsider.com/vw-told-to-recall-500000-cars-after-us-government-accuses-it-of-dodging-clean-air-standards-2015-9

VW told to recall 500,000 cars after US government accuses it of dodging clean air standards

Benjamin Zhang

The Environmental Protection Agency has ordered the recall of 500,000 Volkswagen cars.

According to Coral Davenport of the New York Times, the EPA accused VW of using hidden software — called a "defeat device" — to dodge clean air standard during emissions testing.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," assistant administrator for the Office of Enforcement and Compliance Assurance said Cynthia Giles said in a statement.

"Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

In response to the recall, Volkswagen issued the following statement to Business Insider.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time."

The recall affects 482,000 diesel powered cars sold in the US since 2008. They include:

Volkswagen Jetta TDI: 2009-20015

Volkswagen Beetle TDI: 2009-2015

Audi A3 TDI: 2009-2015

Volkswagen Golf TDI: 2009-2015

Volkswagen Passat TDI: 2014-2015

This story is developing. We will update when more information is available.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:42 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Examiner:

http://www.washingtonexaminer.com/epa-says-audi-vw-cheating-on-emissions/article/2572404

EPA says Audi, VW cheating on emissions

By JOHN SICILIANO

The Environmental Protection Agency and California regulators charged automakers Volkswagen and Audi on Friday with purposefully violating emission standards in their line of diesel cars.

EPA accused the automakers of using a device in their vehicles to get around the pollution rules. According to EPA, the device regulates emissions, but only turns on and works while emissions are being tested.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for the agency's enforcement office. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

Giles said VW was "concealing facts" about the devices. The vehicle models involved include the popular Jetta, Audi A-3, Passat and the iconic Beetle, and in model years 2009-2015. The violations cover 482,000 diesel passenger cars.

The EPA's announcement isn't a final decision, but is a clear sign that the EPA believes it has a case against the automakers, one that could lead to fines as large as $37,000 per vehicle. All together, the combined fines could pile up to $18 billion.

An EPA statement said "California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board ... have both initiated investigations based on Volkswagen's alleged actions."

"Working with US EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," the California board's CEO Richard Corey said. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

WPTZ:

http://www.wptz.com/money/epa-accuses-vw-of-cheating-on-emission-rules/35352250

EPA accuses VW of cheating on emission rules

Published 12:29 PM EDT Sep 18, 2015

NEW YORK (CNNMoney) —Diesel cars from Volkswagen and Audi cheated on clean air rules by including software that made the cars look cleaner than they actually were, according to federal and California regulators.

The regulators say that the software on the cars turned up the emission controls only when it could tell that the car was being tested.

"The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations," said the Environmental Protection Agency's notice to the company. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides at up to 40 times the standard."

There are nearly 500,000 of the diesel cars on U.S. roads. The models include the VW Jetta, the Beetle and the Golf from model years 2009 through 2015, the Passat from 2014-2015 as well as the Audi A3, model years 2009-2015. The luxury brand is owned by Volkswagen.

Owners of the affected cars do not face health risks according to the EPA and can to continue to drive or sell the cars. But the EPA says that VW will be responsible for fixing the problem.

Volkwagen did not immediately respond to a request for comment.

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City AM:

http://www.cityam.com/224676/volkswagen-told-recall-500000-vehicles-over-emissions

Volkswagen told to recall 500,000 vehicles over emissions

by Catherine Neilan

Volkswagen has been ordered to recall nearly half a million cars in the US by the Obama administration, which claims the German car group used software that was purposely designed to dodge environmental standards for reducing smog.

The US government's Environmental Protection Agency issued the company a notice of violation this afternoon, accusing Volkswagen of having installing a "defeat device" into its four-cylinder Volkswagen and Audi vehicles between 2009 and 2015, according to the New York Times.

The device is programmed to detect when the car is undergoing emissions test, during which time it will turn on its full emissions control systems. These controls are reportedly then turned off when the car is driving in "normal" situations, when the cars pollute more heavily than reported by Volkswagen, the EPA claims.

The government agency estimates that 482,000 diesel passenger vehicles are affected.

Volkswagen could not be contacted at the time of publication.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:33 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Times:

http://www.washingtontimes.com/news/2015/sep/18/epa-volkswagen-used-software-cheat-emissions-tests/

EPA: Volkswagen used 'sophisticated software' to cheat emissions tests

By Ben Wolfgang - The Washington Times - Friday, September 18, 2015

The Obama administration on Friday accused Volkswagen of using a "sophisticated software algorithm" to cheat on emissions testing and mask the fact that some models emit too much harmful pollution.

Some Volkswagen cars from model years 2009 to 2015, the Environmental Protection Agency said, include software that can detect when they're undergoing emissions testing. Full emissions controls were activated only during testing and then automatically shut down during normal operation, the agency charged.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

During normal operation, the "defeat device" allowed Volkswagen cars to emit nitrogen oxides at up to 40 times the federal threshold as laid out in the Clean Air Act.

The EPA has issued "a notice of violation" to the automaker, and the state of California has launched its own investigation into the matter. Volkswagen could face civil penalties for the violations, the agency said.

The allegations apply to about 482,000 diesel passenger cars sold since 2008, including Jettas,

Beetles, Audi A3s, Golfs and other models.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:26 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

USA Today:

http://www.usatoday.com/story/money/cars/2015/09/18/epa-accuses-volkswagen-audi-evading-emission-laws/72400018/

EPA accuses Volkswagen, Audi of evading emission laws

Nathan Bomey, USA TODAY 12:12 p.m. EDT September 18, 2015

The German automaker adopted a "defeat device" to trick regulators, the EPA said.

The Environmental Protection Agency on Friday accused Volkswagen of installing software on certain cars in the U.S. to evade federal emission regulations, potentially exposing people to harmful pollutants.

The German automaker adopted what the EPA called a "defeat device" to trick U.S. regulators into believing that its cars met Clean Air Act standards, the federal agency said in a statement.

The agency said 482,000 cars violated federal standards, including four-cylinder Volkswagen cars from 2009-15 and Audi diesel cars from the same period. They included the Volkswagen Jetta, Beetle, Golf and Passat, and the Audi A3.

Volkswagen, whose brands include the luxury Audi lineup, may face fines or other penalties, the EPA said.

The cars are still safe to drive, the EPA said, and owners do not need to take immediate action. But the agency will require Volkswagen to fix the cars for free.

Newsweek:

http://www.newsweek.com/epa-volkswagen-software-cheat-clean-air-rules-373869

EPA: Volkswagen Used Software in Cars to Cheat on Clean Air Rules

BY ZOË SCHLANGER 9/18/15 AT 12:14 PM

A U.S. Environmental Protection Agency investigation has concluded that for years Volkswagen has been installing software in its vehicles that circumvents federal emissions standards for air pollution, the agency announced Friday.

EPA alleges that Volkswagen installed a "sophisticated software algorithm on certain Volkswagen vehicles" that could detect when the car was being tested for emissions. The software would turn full emissions controls on only during the official test. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," EPA said in a press release. They called the software a "defeat device," deliberately installed to evade the Clean Air Act standards.

This "defeat device" was found in several car models, from 2009 models up to 2015 models, according to EPA:

Jetta (Model Years 2009 – 2015)

Beetle (Model Years 2009 – 2015)

Audi A3 (Model Years 2009 – 2015)

Golf (Model Years 2009 – 2015)

Passat (Model Years 2014-2015)

In total, this includes about 482,000 passenger cars.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, EPA's Assistant Administrator for the Office of Enforcement and Compliance Assurance, said in a statement emailed Friday. The agency worked with California regulators to investigate the automobile manufacturer and issue a notice of violation.

"Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," California Air Resources Board Executive Officer Richard Corey said in the statement.

Volkswagen has yet to respond publicly to the EPA allegations. Newsweek has reached out to the company for comment, and we will update if they respond.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:20 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: Volkswagen Clips 9/18/2015

NY Times:

http://www.nytimes.com/2015/09/19/business/volkswagen-is-ordered-to-recall-nearly-500000-

vehicles-over-emissions-software.html?_r=0

Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

By CORAL DAVENPORT SEPT. 18, 2015

WASHINGTON — The Obama administration on Friday ordered Volkswagen to recall nearly a half million cars from the road, saying the German automaker used software intentionally designed to circumvent environmental standards for reducing smog.

The Environmental Protection Agency issued the company a notice of violation and accused the company of breaking the law by installing software known as a "defeat device" in 4-cylinder Volkswagen and Audi vehicles from model years 2009-15. The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

The software was designed to conceal the cars' emissions of the pollutant nitrogen oxide, which contributes to the creation of ozone and smog. The pollutants are linked to a range of health problems, including asthma attacks and other respiratory diseases.

The state of California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

The allegations cover roughly 482,000 diesel passenger cars sold in the United States since 2009.

Affected diesel models include the Volkswagen Jetta (model years 2009-15), Volkswagen Beetle (model years 2009–15), Audi A3 (model years 2009–15), Volkswagen Golf (model years 2009–15) and Volkswagen Passat (model years 2014-15).

The notice of violation is part of a broader, more aggressive enforcement effort by federal environmental regulators on the auto industry. Analysts said it was meant to send a clear message to automakers that they will be harshly treated for compromising federal rules.

It follows a November 2014 announcement of the administration's largest-ever penalty for a violation of the Clean Air Act, in which the government fined the Korean automakers Hyundai Motor and Kia Motors a combined $300 million as part of a settlement for overstating vehicle fuel-economy standards on 1.2 million cars.

"They want to make it clear that they're going to crack down on cheaters," said Frank O'Donnell, president of the environmental advocacy group Clean Air Watch. "They're cheating not only car buyers but the breathing public. They want to lay down the law, enforce the law, and show they're not going to tolerate cheaters. The laws and regulation are only as good as the enforcement."

The software was designed to conceal the cars' emissions of the pollutant nitrogen oxide, which contributes to the creation of ozone and smog. The pollutants are linked to a range of health problems, including asthma attacks and other respiratory diseases.

The state of California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

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2009–15) and Volkswagen Passat (model years 2014-15).

The notice of violation is part of a broader, more aggressive enforcement effort by federal environmental regulators on the auto industry. Analysts said it was meant to send a clear message to automakers that they will be harshly treated for compromising federal rules.

It follows a November 2014 announcement of the administration's largest-ever penalty for a violation of the Clean Air Act, in which the government fined the Korean automakers Hyundai Motor and Kia Motors a combined $300 million as part of a settlement for overstating vehicle fuel-economy standards on 1.2 million cars.

"They want to make it clear that they're going to crack down on cheaters," said Frank O'Donnell, president of the environmental advocacy group Clean Air Watch. "They're cheating not only car buyers but the breathing public. They want to lay down the law, enforce the law, and show they're not going to tolerate cheaters. The laws and regulation are only as good as the enforcement."

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 18 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

VW FOIA, EPA 06/20/2017 2017-FFP_024061

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

VW FOIA, EPA 06/20/2017 2017-FFP_024064

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

VW FOIA, EPA 06/20/2017 2017-FFP_024065

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

VW FOIA, EPA 06/20/2017 2017-FFP_024066

To: Van Eaton, Josh (ENRD)[Josh.Van.Eaton@usdoj.gov]; Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Fri 9/18/2015 5:53:48 PM
Subject: VW link

Here is the link to our website which also links to CARB (at the bottom). I see CARB now has their letter posted as well.

http://www3.epa.gov/otaq/cert/violations.htm

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Birgfeld, Erin
Sent: Fri 9/18/2015 5:55:41 PM
Subject: FW: Volkswagen

HI Chris,

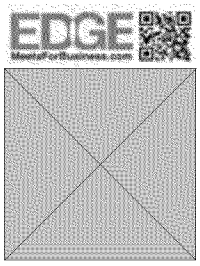
I told Laura you could do this interview. Stay tuned....

From: Allen, Laura
Sent: Friday, September 18, 2015 1:44 PM
To: Birgfeld, Erin; Millett, John
Cc: Conger, Nick; Purchia, Liz; Hull, George; Senn, John
Subject: Fwd: Volkswagen

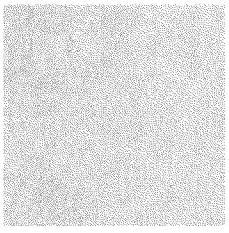
Could Chris g do this interview?

Begin forwarded message:

> **From:** Alex Green <agreen@timesfreepress.com>
> **Date:** September 18, 2015 at 1:26:20 PM EDT
> **To:** Press <press@epa.gov>
> **Subject: Volkswagen**
>
> I'm a reporter at the Times Free Press in Chattanooga, and I just saw the EPA's release on Volkswagen vehicles and the technology that allegedly allows some vehicles to pass emissions testing but turn off environmental safeguards otherwise.
>
> The Passat is made here in Chattanooga, so we would like to speak with someone at EPA about the recall.
>
> My phone number is Ex. 6 and I'll be available the rest of the afternoon.
>
> Alex
>
> --
>
> **Alex Green**
> staff writer
> Ex. 6


EDGE

To: Grundler, Christopher[grundler.christopher@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Fri 9/18/2015 5:57:29 PM
Subject: VW accused of using software in 482,000 diesels to skirt U.S. clean-air rules Automotive News.
VW accused of using.pdf



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Ex. 4 - CBI (Contractor)

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory Library

2000 Traverwood Drive

Ann Arbor, MI 48105

Ex. 4 - CBI

http://www.epa.gov/otaq

Ex. 4 - CBI

To: Kaplan, Robert[kaplan.robert@epa.gov]
From: Brooks, Phillip
Sent: Fri 9/18/2015 6:19:16 PM
Subject: RE: BREAKING NEWS: EPA says VW intentionally violates clean air standards

I heard of this.

From: Kaplan, Robert
Sent: Friday, September 18, 2015 12:54 PM
To: Brooks, Phillip
Subject: Fwd: BREAKING NEWS: EPA says VW intentionally violates clean air standards

Sent from my iPhone

Begin forwarded message:

From: EnergyGuardian <energy@email.energyguardian.net>
Date: September 18, 2015 at 12:52:26 PM EDT
To: "kaplan.robert@epa.gov" <kaplan.robert@epa.gov>
Subject: BREAKING NEWS: EPA says VW intentionally violates clean air standards
Reply-To: EnergyGuardian <energy@washingtonguardian.net>

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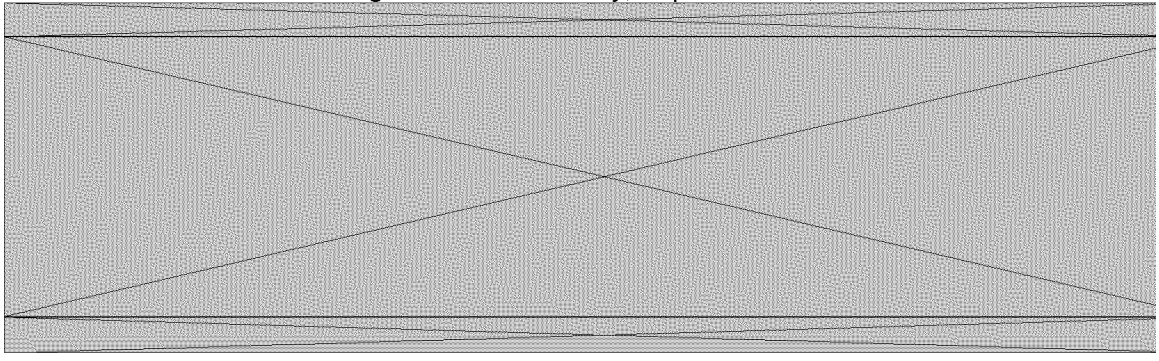
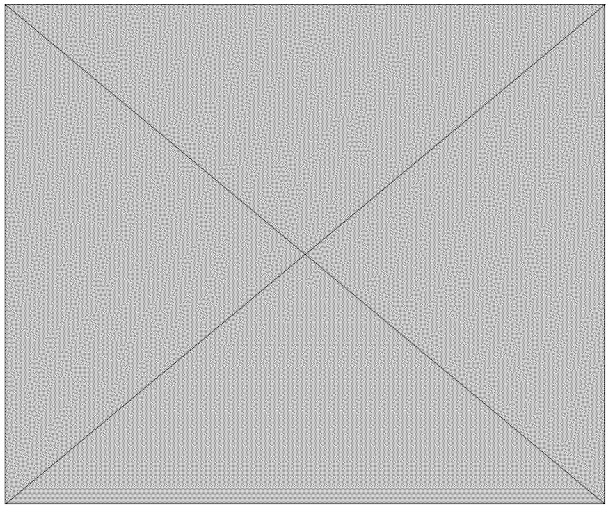
Breaking headlines for Friday, September 18, 2015





EPA says VW intentionally violates clean air standards

By Matthew Daly

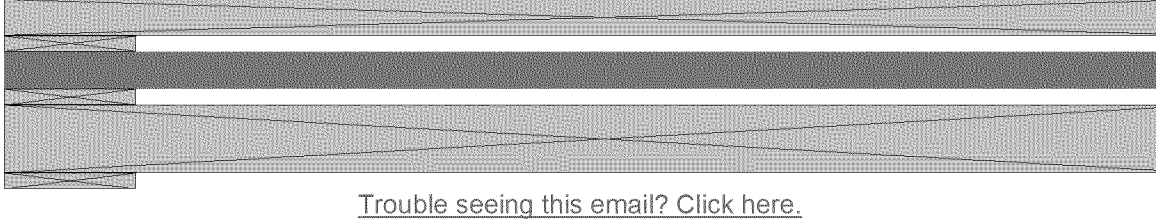
WASHINGTON (AP) — The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.



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From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Fri 9/18/2015 6:40:43 PM
Subject: Volkswagen Evaded Clean Air Act
MAIL_CONVERSATION_TOPIC: Volkswagen Evaded Clean Air Act
Created: Fri 3/18/2016 6:18:23 PM

Volkswagen intentionally installed software in nearly a half-million diesel vehicles that helped the cars evade substandard results on emissions tests, the federal government charged Friday. Volkswagen intentionally installed software in nearly a half-million diesel vehicles that helped the cars evade substandard results on emissions tests, the federal government charged Friday. The Environmental Protection Agencyissued a notice of violation ...

View article...

To: Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
From: McCabe, Janet
Sent: Fri 9/18/2015 6:41:47 PM
Subject: FW: EPA calls for Volkswagen recall over 'defeat devices'

Look what they picked up!

From: POLITICO Pro [mailto:politicoemail@politicopro.com]
Sent: Friday, September 18, 2015 1:06 PM
To: McCabe, Janet
Subject: EPA calls for Volkswagen recall over 'defeat devices'

EPA calls for Volkswagen recall over 'defeat devices'

By Jennifer Scholtes

09/18/2015 12:32PM EDT

Obama administration officials say they have caught Volkswagen using "defeat devices" to trick emissions tests and are calling for the recall of more than 480,000 diesel vehicles between model years 2009 and 2015.

"We expected better of VW," Cynthia Giles, EPA assistant administrator for the Office of Enforcement and Compliance Assurance, said on a conference call with reporters this afternoon. Software installed on certain models allegedly only enable full emissions protection while the automobiles are being officially tested, the agency said.

Agency officials confirmed they have the authority to fine the automaker $37,500 per car, plus additional penalties for Clean Air Act violations.

To view online:
https://www.politicopro.com/energy/whiteboard/2015/09/obama-administration-calls-for-massive-volkswagen-recall-over-defeat-devices-060679

To change your alert settings, please go to https://www.politicopro.com/member/alerts

---

This email was sent to mccabe.janet@epa.gov by: POLITICO, LLC 1000 Wilson Blvd. Arlington, VA, 22209, USA

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Bunker, Byron[bunker.byron@epa.gov]
From: Birgfeld, Erin
Sent: Fri 9/18/2015 6:52:25 PM
Subject: FW: Volkswagen

Chris and Byron,

You are on for an interview with Alex Green at 3:30 (Chattenooga News). Q's are below.

I'll have Laura come up to your office Chris.

-Erin

From: Allen, Laura
Sent: Friday, September 18, 2015 2:43 PM
To: Birgfeld, Erin; Millett, John
Cc: Hull, George; Conger, Nick; Senn, John
Subject: Fwd: Volkswagen

Erin- could CG do 3:30 today with Alex Green? See more on his questions below.

Begin forwarded message:

> **From:** Alex Green <agreen@timesfreepress.com>
> **Date:** September 18, 2015 at 2:30:01 PM EDT
> **To:** "Allen, Laura" <Allen.Laura@epa.gov>
> **Subject: Re: Volkswagen**
>
> Hey Laura,
>
> Thank you and definitely. I'll paste a couple of examples below:
>
> 1.) Was the EPA actively trying to determine whether Volkswagen had installed "defeat devices" on certain models? Is is standard practice for auto makers' products to be tested the way VW vehicles were tested? Or did the university discover the problem and then alert the

EPA?

2.) Can someone describe how big of an issue it is for an auto maker to be caught allegedly "cheating" on auto emissions technology? I would imagine that being caught trying to game the test mechanism is actually worse, from a punitive perspective, than simply failing to property outfit vehicles in the first place.

3.) Would a recall be EPA ordered? Or does VW assume the responsibility to recall voluntarily?

4.) Are there any other examples of prominent auto makers outfitting vehicles with "defeat devices?" And if so, what was the outcome?

5.) Does VW's local Chattanooga plant stand to feel the impact of the alleged emissions cheating?

On Fri, Sep 18, 2015 at 1:47 PM, Allen, Laura <Allen.Laura@epa.gov> wrote:

> Hey Alex- yes, let me find the best person. Can you give me an idea of your questions so I can make sure I'm getting the right expert for you?
>
> Laura Allen
>
> Deputy Press Secretary
> Office of the Administrator
> U.S. Environmental Protection Agency
>
> Email: Allen.Laura@epa.gov
>
> Office: 202-564-1175
>
> Mobile: 202-731-3005
>
> Please consider the environment before printing this email.
>
> On Sep 18, 2015, at 1:26 PM, Alex Green <agreen@timesfreepress.com> wrote:

I'm a reporter at the Times Free Press in Chattanooga, and I just saw the EPA's release on Volkswagen vehicles and the technology that allegedly allows some vehicles to pass emissions testing but turn off environmental safeguards otherwise.

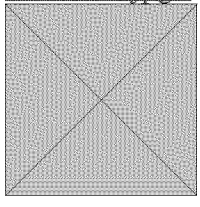
The Passat is made here in Chattanooga, so we would like to speak with someone at EPA about the recall.

My phone number is 423-757-6480, and I'll be available the rest of the afternoon.

Alex

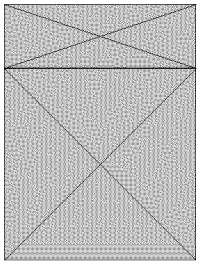
--

Alex Green
staff writer
423-757-6480

<EDGE2.jpg>


--

Alex Green
staff writer
423-757-6480



To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
From: Bunker, Byron
Sent: Fri 9/18/2015 7:13:49 PM
Subject: RE: Volkswagen

I will be in C174 (Chris's AA conference room) at 3:25.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Birgfeld, Erin
Sent: Friday, September 18, 2015 2:52 PM
To: Grundler, Christopher
Cc: Bunker, Byron
Subject: FW: Volkswagen

Chris and Byron,

You are on for an interview with Alex Green at 3:30 (Chattenooga News). Q's are below.

I'll have Laura come up to your office Chris.

-Erin

From: Allen, Laura
Sent: Friday, September 18, 2015 2:43 PM
To: Birgfeld, Erin; Millett, John
Cc: Hull, George; Conger, Nick; Senn, John
Subject: Fwd: Volkswagen

Erin- could CG do 3:30 today with Alex Green? See more on his questions below.

Begin forwarded message:

> **From:** Alex Green <agreen@timesfreepress.com>
> **Date:** September 18, 2015 at 2:30:01 PM EDT
> **To:** "Allen, Laura" <Allen.Laura@epa.gov>
> **Subject: Re: Volkswagen**
>
> Hey Laura,
>
> Thank you and definitely. I'll paste a couple of examples below:
>
> 1.) Was the EPA actively trying to determine whether Volkswagen had installed "defeat devices" on certain models? Is is standard practice for auto makers' products to be tested the way VW vehicles were tested? Or did the university discover the problem and then alert the EPA?
>
> 2.) Can someone describe how big of an issue it is for an auto maker to be caught allegedly "cheating" on auto emissions technology? I would imagine that being caught trying to game the test mechanism is actually worse, from a punitive perspective, than simply failing to property outfit vehicles in the first place.

3.) Would a recall be EPA ordered? Or does VW assume the responsibility to recall voluntarily?

4.) Are there any other examples of prominent auto makers outfitting vehicles with "defeat devices?" And if so, what was the outcome?

5.) Does VW's local Chattanooga plant stand to feel the impact of the alleged emissions cheating?

On Fri, Sep 18, 2015 at 1:47 PM, Allen, Laura <Allen.Laura@epa.gov> wrote:

> Hey Alex- yes, let me find the best person. Can you give me an idea of your questions so I can make sure I'm getting the right expert for you?
>
> Laura Allen
>
> Deputy Press Secretary
> Office of the Administrator
> U.S. Environmental Protection Agency
>
> Email: Allen.Laura@epa.gov
>
> Office: 202-564-1175
>
> Mobile: 202-731-3005
>
> Please consider the environment before printing this email.
>
> On Sep 18, 2015, at 1:26 PM, Alex Green <agreen@timesfreepress.com> wrote:
>
> > I'm a reporter at the Times Free Press in Chattanooga, and I just saw the EPA's release on Volkswagen vehicles and the technology that allegedly allows some vehicles to pass emissions testing but turn off environmental safeguards otherwise.

The Passat is made here in Chattanooga, so we would like to speak with someone at EPA about the recall.

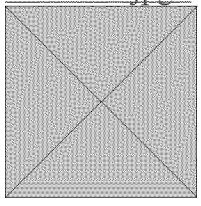
My phone number is Ex. 6 and I'll be available the rest of the afternoon.

Alex

--

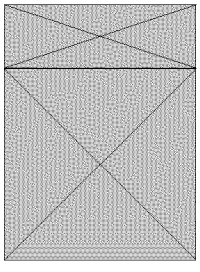
Alex Green
staff writer
Ex. 6

<EDGE2.jpg>



--

Alex Green
staff writer
Ex. 6



To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Kushner, Adam M.
Sent: Fri 9/18/2015 7:16:47 PM
Subject: RE: News

gotcha

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Friday, September 18, 2015 3:06 PM
To: Kushner, Adam M.
Subject: Re: News

Kirkland. Stuart Drake for one.

Sent from my iPhone

On Sep 18, 2015, at 3:04 PM, Kushner, Adam M. <adam.kushner@hoganlovells.com> wrote:

> Hard to miss -- all over the trade press.
>
> Interesting.
>
> Who representing VW?
>
> **From:** Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
> **Sent:** Friday, September 18, 2015 3:03 PM
> **To:** Kushner, Adam M.
> **Subject:** News
>
> http://www3.epa.gov/otaq/cert/violations.htm
>
> Sent from my iPhone

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To: Senn, John[Senn.John@epa.gov]
Cc: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Fri 9/18/2015 7:23:46 PM
Subject: Re: Press Q re penalties

Ex. 5, 7

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 18, 2015, at 3:15 PM, Senn, John <Senn.John@epa.gov> wrote:

Ex. 5, 7

Thanks,
John

From: Abrams, Dan
Sent: Friday, September 18, 2015 3:08 PM
To: Senn, John
Subject: FW: Volkswagen

From: John BIERS [mailto:John.BIERS@afp.com]
Sent: Friday, September 18, 2015 3:03 PM
To: Abrams, Dan

Subject: RE: Volkswagen

Dan,

Just looking at this again, the NOV also mentions a penalty of up to $3,750 per vehicle for the other CAA violation, so would that be about $1.8 billion total as well?

John

John M. Biers

Business correspondent

Agence France-Presse

747 Third Avenue, 35th Floor

New York, NY 10017

w) 212-735-9206

m) 917-239-9246

john.biers@afp.com

Twitter: johnbiers1

From: Abrams, Dan [mailto:Abrams.Dan@epa.gov]
Sent: Friday, September 18, 2015 2:59 PM
To: John BIERS
Subject: RE: Volkswagen

Hi John:

The NOV describes the civil penalty provisions of the law that may apply. The statute provides for civil penalties of up to $37,500 per vehicle sold in violation of the CAA, plus additional penalties for other violations. The allegations in the NOV cover roughly 482,000 vehicles.

Thanks

-Dan

From: Abrams, Dan
Sent: Friday, September 18, 2015 2:20 PM
To: 'John BIERS'; Press
Subject: RE: Volkswagen

Hi John:

The NOV is here:

http://www3.epa.gov/otaq/cert/documents/vw-nov-caa-09-18-15.pdf

Dan Abrams

U.S. Environmental Protection Agency

Office: (202) 564-2507 *Mobile*: (202) 768-5811

1200 Pennsylvania Avenue NW

Washington, DC 20460

From: John BIERS [mailto:John.BIERS@afp.com]
Sent: Friday, September 18, 2015 2:17 PM
To: Press
Subject: Volkswagen

Hi there,

Can you email me the notice of violation from today's Volkswagen announcement? Also, is there a point of contact at EPA I could phone if there are questions?

Thank you for your help.

John Biers

John BIERS
Business Correspondent
747 Third Avenue - NY 10017 New York
Tel: +1 212 735 9206 - Fax: +1 212 755 1928
<image001.png>

September 18, 2015
Croatia begins bussing migrants to Hungary border

Join us on:
<image005.png>

Ex. 5

From: Abrams, Dan
Sent: Friday, September 18, 2015 3:08 PM
To: Senn, John
Subject: FW: Volkswagen

From: John BIERS [mailto:John.BIERS@afp.com]
Sent: Friday, September 18, 2015 3:03 PM
To: Abrams, Dan
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m) 917-239-9246

john.biers@afp.com

Twitter: johnbiers1

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Dan Abrams

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To: Press
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John Biers

John BIERS
Business Correspondent
747 Third Avenue - NY 10017 New York
Tel: +1 212 735 9206 - Fax: +1 212 755 1928
<image001.png>

September 18, 2015
Croatia begins bussing migrants to Hungary border

Join us on:
<image005.png>

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Fri 9/18/2015 7:41:00 PM
Subject: EPA accuses VW of evading emissions laws
MAIL_CONVERSATION_TOPIC: EPA accuses VW of evading emissions laws
Created: Fri 3/18/2016 6:18:23 PM

The Environmental Protection Agency on Friday accused Volkswagen of installing software on certain cars in the U.S. to evade federal emission regulations, potentially exposing people to harmful pollutants.

View article...

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 9/18/2015 7:41:52 PM
Subject: P.M. NEWSCAST: EPA: VW 'defeat device' skirts emissions rules | Benz's $1.3B SUV plan | JCI targets 3,000 job cuts | Stein strolls Frankfurt | Lost in translation

September 18, 2015

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Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 9/18/2015 7:42:07 PM
Subject: P.M. NEWSCAST: EPA: VW 'defeat device' skirts emissions rules | Benz's $1.3B SUV plan | JCI targets 3,000 job cuts | Stein strolls Frankfurt | Lost in translation

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To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Millett, John[Millett.John@epa.gov]
From: Bunker, Byron
Sent: Fri 9/18/2015 7:52:01 PM
Subject: Defeat device history - 1972

https://news.google.com/newspapers?nid=1755&dat=19721216&id=Fkg0AAAAIBAJ&sjid=nmYEAAAAIBAJ

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

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Ann Arbor, MI 48105

Bunker.Byron@epa.gov

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Mobile: (734) 353-9623

****

To: Bunker, Byron[bunker.byron@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Millett, John
Sent: Fri 9/18/2015 8:00:05 PM
Subject: RE: Defeat device history - 1972

Non-Responsive

~~~~~~~~~~~~~~~~~~~~

From: Bunker, Byron
Sent: Friday, September 18, 2015 3:52 PM
To: Grundler, Christopher
Cc: Birgfeld, Erin; Millett, John
Subject: Defeat device history - 1972

https://news.google.com/newspapers?nid=1755&dat=19721216&id=Fkg0AAAAIBAJ&sjid=nmYEAAAAIBAJ

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

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Ann Arbor, MI 48105
~~~~~~~~~~~~~~~~~~~~

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: vwemporium@aol.com[vwemporium@aol.com]; McDaniel, Doug[McDaniel.Doug@epa.gov]; Pugliese, Holly[pugliese.holly@epa.gov]; Ruske, Ross[Ruske.Ross@epa.gov]
From: European Parts
Sent: Fri 9/18/2015 8:03:45 PM
Subject: Re: Some key points of interest EPA emission violations.
RTK_technologies_vs_Jack_Shapiro.pdf

Attention EPA.....

Maybe I wasn't so wrong here, and shouldn't be ignored when stating something!

http://www.nytimes.com/2015/09/19/business/volkswagen-is-ordered-to-recall-nearly-500000-vehicles-over-emissions-software.html?hp&action=click&pgtype=Homepage&module=first-column-region&region=top-news&WT.nav=top-news&_r=0

Especially with very recent reports that seem to fall on deaf ears by me directly.

So you let this continue for 6 years.....?

Be advised VW-AUDI TFSI and TSI 2005> all do this for GAS cars..... not just diesels.

2000> ALL VW-AUDI supporting KWP 2000 updates have done this, additionally for misfire deletes or CAT thresholds by OEM and .....The AFT I very recently reported.

So I am being sued in Federal Court, by a Foreign National Company that purports this fraud, and illegal acts due to your failure to listen.

Seems not so fair, and I am extremely disappointed with Government right now, I have been hung out to dry. FAIL!

Sincerely,

Jack Shapiro E.P.E.
VAS>Geko ASE Extern
7076062 NYS DMV
SAE>NASTF

European Parts Emporium
Immobilizer Solutions
1001 State Route 17K
Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL/FAX
845-784-0335 Net

-----Original Message-----
From: Pugliese.Holly <Pugliese.Holly@epamail.epa.gov>
To: vwemporium <vwemporium@aol.com>
Cc: Chris.White <Chris.White@mail.house.gov>

Sent: Tue, Apr 6, 2010 9:42 am
Subject: Re: EPA VW Issue.

Mr. Shapiro.

The SVM tool allows for access to and the reconfiguration of manufacturer calibration information contained in VW's vehicle modules. Throughout the history of EPA's involvement in regulating service information, we have been supportive of manufacturer efforts to control and protect the access to the underlying computer code and/or the ability to change vehicle configurations. EPA has always asserted that, while aftermarket shops need the ability to reprogram emissions-related modules, access to the underlying code is not required to complete a repair. In fact, requiring manufacturers to allow such access would undermine EPA's anti-tampering laws which make a federal offense to intentionally or unintentionally alter the original EPA certified configurations of a vehicle.

EPA has worked closely with manufacturers and the aftermarket over the years to balance the needs of the aftermarket to be able to complete emissions-related repairs while allowing manufacturers to prevent tampering and manage liability. There is nothing in the regulations that require manufacturers to make available the means to do a repair in exactly the same manner as a dealer. In fact, the pass-through reprogramming provisions in our regulations specifically require manufacturers to adopt the generic industry standard developed by the Society of Automotive Engineers for pass-through reprogramming to ensure that aftermarket shops can perform reprogramming without having to invest in more costly manufacturer-specific tools that dealers are required to purchase to perform these same repairs.

VW has 3 options in place for the aftermarket to complete repairs such as this that require a security ID that you have been requesting.

- VW's fulfillment house provides a service whereby VW technical support staff can, through an on-line connection to the diagnostic tool, enter the password required to complete the operation

- VW's service information web site provides access to software that makes this function available for use with a lap top and a pass thru device. An enrollment process is required for security reasons, which EPA believes is reasonable.

- VW also participates in the Secure Data Release Model which was developed as a joint effort between manufacturers and the National Automotive Service Task Force which specifically designed to allow "registered" independents to obtain access to security information. An enrollment process is required for this as well.

While we understand that more sophisticated technicians may wish to have access to the underlying module information that some dealers have access to, EPA regulations do not compel manufacturers to do so if they have in place reasonable alternatives to complete the same repairs. In the case, we believe that VW has made available several reasonable options and therefore we do not think it is appropriate to require VW to release the SVM tool.

Regards,

Holly

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	03/18/2010 06:29 PM
Subject:	Re: EPA VW Issue.

Hello Holly,

The information I sent you was a simulation of what can be experienced but not exactly what I experienced, and I believe I was clear and apologize if I was not.
The module will not retain the coding in certain instances. It will become all zeros if there is a disruption on the gateway, or the grounds cause some sporadic spike for the ABS module etc.
Including power interruption as stated by VW, is correct if just pulling a fuse.

I experienced the coding of the ABS module to go to all zeros, however I could still communicate with the module and if you don't have the SVM access you cant configure the module even with the current base CD 16 other then via SVM.

Based on the final rule of 2003 I bought the tester VAS 5052 at full retail. I am entitled to the information, all services a dealer technician is to have access to. There was no crippled emissions only version made or offered in the USA at any time.

The repair information or the tester can't access the config of this module at all. It must enter a proprietary mode via the SVM server known as 83 communication mode, as I have stated before in order to recode, or install a new ABS module to config.

I have since figured out how to duplicate what I have stated above, by not removing a fuse, and can send you screen shots as well as a data log of the communication to prove you, your obd engineer and VW are incorrect.

This is also incorrect in regards to the following statement with answers .

"EPA OBD engineers have reviewed the additional information you provided to us and we consulted with VW. VW advised us that they are aware of the fact that, when an ABS module has a loss of communication, it will not communicate the long code data, as it has lost communication. According to VW, the module itself does not lose the data, (INCORRECT not each time) **it merely cannot broadcast it when it has lost communication. When power to the module is restored, the long coding data can then be read.** *(THIS IS INCORRECT!) (You can only read that it is now zero long coding string lost, you can talk to the module of the ABS but it has lost its config as I have stated previous. At this point you require SVM via the GTI test plan or any other for this driveline)*
The test you conducted by removing a fuse to simulate the bad ground the car had initially (as shown in the screen shots you provided) *(YES BASED ON THE SCREEN SHOTS I PROVIDED BUT I ALSO ASKED YOU IF YOU REQUIRED MORE DETAILED DATA AND ALSO DESCRIBED THE PROBLEM LONG BEFORE TO YOU IN PREVIOUS EMAILS)* ***subsequently set codes in all other*** **modules indicating that no communication was received from the ABS module. Again, a module will not communicate on the bus if it has lost power supply. When the power is restored, the module will show all data, and can be read with a scan tool. This module does not require reprogramming or reconfiguration as this information is retained in the module.** *(THIS IS ALSO INCORRECT. Not in all cases such as the one I have requested the data in regards to.)*

According to VW service information is available to aftermarket shops for all models that receive vehicle speed from the ABS controller. In addition, service diagnostics information is available for all VW platforms to diagnose the "Loss of Communication" fault that you reported, regardless of the actual location of the vehicle speed sensor (VSS). VW also has a technical service bulletin for a scan tool software release 14.88.00 (released Aug. 7, 08) "that may not code these modules

correctly and it will take SW 14.89.00 (released Sept. 17, 08) before this condition is corrected". *(THIS HAS NEVER BEEN CORRECTED BECAUSE THE VAS 5052 TESTER CANT ENTER 83 MODE MANUALLY OTHER THEN VIA THE SVM SERVER TO DATE AUTOMATICALLY)*

Scenario :

OK for example: If you have a a faulty abs module. Which will not communicate with the above condition for example, power loss IE grounds, water damage, etc. You require a new abs ECU. I install a new one, Its factory default coding will be coded all zeros. I plug in my VAS 5052 tester purchased from VW with a full up to date subscription of base 16 In order to configure. I am then asked by the tester for my Username and password for Geko access for SVM to finish the repair.
Hence why I am asking for your assistance in this matter!
VW wont allow login for geko cars below 2010.

And

I believe this is an important safety issue as well.

Please provide the proper contacts if you have them.

I believe this is still a EPA authority based on the final rule. As I have stated above. Am I incorrect with what I have stated in regards to buying a complete factory tester at full retail price?
I purchased my tool in good faith with the impression I would be able to perform safe and complete repairs to compete with the dealer network on a fair playing field, to provide safe and emission compliant repairs as I am required to by law as per the DMV regulations of NYS as a licensed repair facility.

Please advise

Regards,

Jack Shapiro

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: Chris.White@mail.house.gov
Sent: Thu, Mar 18, 2010 3:49 pm
Subject: Re: EPA VW Issue.

Mr. Shapiro:

Based on the additional information you provided to us, it seems the fundamental issue you are having after conducting the GTI test plan is that you are still unable to read the long code data for the ABS module with a U0121 code set. It is your position that this is an emissions-related issue and that the aftermarket must have access to VW's SVM tool in order to properly perform a repair as there is no technician help line available for independent technicians.

Based on the information you provided to us, it appears that you were attempting to read ABS information when the module did not have a proper power supply (i.e. bad ground).

EPA OBD engineers have reviewed the additional information you provided to us and we consulted with VW. VW advised us that they are aware of the fact that, when an ABS module has a loss of communication, it will not communicate the long code data, as it has lost communication. According to VW, the module itself does not lose the data, it merely cannot broadcast it when it has lost communication. When power to the module is restored, the long coding data can then be read.
The test you conducted by removing a fuse to simulate the bad ground the car had initially (as shown in the screen shots you provided) subsequently set codes in all other modules indicating that no communication was received from the ABS module. Again, a module will not communicate on the bus if it has lost power supply. When the power is restored, the module will show all data, and can be read with a scan tool. This module does not require reprogramming or reconfiguration as this information is retained in the module.

According to VW service information is available to aftermarket shops for all models that receive vehicle speed from the ABS controller. In addition, service diagnostics information is available for all VW platforms to diagnose the “Loss of Communication” fault that you reported, regardless of the actual location of the vehicle speed sensor (VSS). VW also has a technical service bulletin for a scan tool software release 14.88.00 (released Aug. 7, 08) "that may not code these modules correctly and it will take SW 14.89.00 (released Sept. 17, 08) before this condition is corrected".

After reviewing the information you provided, we have concluded that the SVM tool is not necessary for this particular repair and that EPA does not have the legal authority to require the release of the SVM tool.

Regards,

Holly Pugliese
US EPA

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	03/18/2010 12:02 PM
Subject:	Re: EPA VW Issue.

Hello Holly,

Is there a response?

I also wanted you to be advised I requested a username and password again via a customer advocate verbally over the telephone.

Ref # 100119652

There response was to inform me over the phone, VW, has not changed there position.

I let them know I would be moving forward civil and on a media level if they could not supply a use of this service in 30 days.

I asked them to reconsider there position on the matter.

I was wondering have they reconsidered allowing me access to this service through you and do you have the power to enforce this if they have not?

Regards,

Jack Shapiro

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: Chris.White@mail.house.gov
Sent: Wed, Mar 10, 2010 3:42 pm
Subject: Re: EPA VW Issue.

We are working on a formal response which we should have for you by the end of the week. Thank you for your patience.

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	03/08/2010 02:45 PM
Subject:	EPA VW Issue.

Hello Holy Pugliese EPA,

Is there any information in regards to this issue with VW-Audi for the SVM-GEKO system?
It has been many months with no information.

Do you require any additional information?
Do you have correspondence form VW-Audi for me to review for rebuttal?

Best,

Jack Shapiro

Hello Holly Pugliese EPA

Please see data attached via scan of my car 2009 TDI.
If you require screen shots of the VAS 5052 or repair data to back up my previous statements for this car, or other earlier cars with similar issues prior to 2010 requiring SVM potentially, let me know.
This was induced by pulling a fuse to simulate the bad ground the car had initially, also causing the con fig of the ABS long coding to become all zeros.

TSB/TECH tip reference to support such claims below that an issue existed even on the dealer level.

TSB/Tech tip which we as independents didn't get access to until end Dec of 2008.

TT 45-08-05

2009 Jetta, GTI, EOS, Rabbit - ABS Module Long Coding

The above listed vehicles are equipped with a long coded ABS module. Tester software (SW) 14.88.00 may not code these modules correctly and it will take SW 14.89.00 before this condition is corrected. In the meantime, please read out any long coded ABS units before replacing the ABS module or the instrument cluster, in order to manually reinstall the coding in a replacement part. If the coding has been lost for any reason, try to code through the GTI test plan and, if an error is still returned, contact the VW Technician's Help line. A workaround process is in place.

After conducting this test path the only thing left is SVM as there is no Tech help line open to independents.

Please advise.

Best,
Jack Shapiro

Proprietary area of scanner :

1 Fault Found:
049441 - No Communication with ABS Brake Control Module
U0121 - 000 - - - Intermittent
Freeze Frame:
Fault Status: 00100000
Fault Priority: 2
Fault Frequency: 1
Mileage: 2737 km
Time Indication: 0
Date: 2000.00.00
Time: 01:07:05

OBD2 mode of scanner waiting to pend with problem induced to recreate.
With reset of DTC's still showing pend for issue.

Mode 07: Pending emission related fault codes
Address 7E8: 1 Fault Found:
U0121 - No Communication with ABS Brake Control Module

Mode 9 : Calibration Identification
Type 02 - VIN : 3VWAL71K19M007485 (Address E8)
Type 04 - Calibration ID : 03L997016N 5109 (Address E8)
Type 06 - Calibration Verification Number : F8D4A8FC (Address E8)
Type 0A - Controller Name : ECM-Engine Control (Address E8)

Mode 07: Pending emission related fault codes
Address 7E8: 1 Fault Found:
U0121 - No Communication with ABS Brake Control Module

OBD DTCs erased

Mode 07: Pending emission related fault codes
Address 7E8: 1 Fault Found:
U0121 - No Communication with ABS Brake Control Module

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Sent: Fri, Jan 8, 2010 8:18 am
Subject: Re: update on EPA discussion with VW

If I understand you correctly, you are suggesting that access is needed to ABS and other systems through SVM because they trigger emissions related DTCs? Is that correct? I just want to make sure I understand your assertion so I can communicate further with VW.

thanks..

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	01/07/2010 04:02 PM
Subject:	Re: update on EPA discussion with VW

Mrs. Pugliese,

I believe I have made myself very clear here and I am not only referring to the Immobilizer program when referring to the technical service bulletin I provided you.

The program I have specifically referred to is **SVM**

SVM: stands for Software Version Management. (This also requires a user name and password for Geko even for cars below 2010) Cars that may require coding range from 1989> from the introduction of the VAG1551 to present day which clearly states will effect emissions if not done proper via the repair manual.
The repair manual used to contain the coding and long coding data to configure these options. It has been deliberately removed and I can prove this if you require.
They moved it to the factory tester and then to the online server via **SVM.**

This was denied to me on my very own VW Jetta TDI 2009 car via the factory tester. For long coding the ABS and ESP to the car to work with the engine ECU which clearly displayed a fault for the impairment. A DTC constitutes failure of emissions in the engine ECU. when informed via the gateway that the ABS is at odds.

This access is required in order to perform emissions related repairs.

As I have said in your final rule they must make available all the same services of the factory tester to me that they provide to there dealership even if non related to emissions due to not selling a crippled emissions version only. This would have been registered with you and was not ever to this day or at time I purchased my OEM VAS 5052 factory scanner.

Please advise,

Jack Shapiro

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: Chris.White@mail.house.gov
Sent: Thu, Jan 7, 2010 3:10 pm
Subject: Re: Fwd: update on EPA discussion with VW

Mr. Shaprio. Attached is a summary of EPA's finding regarding the VW issues that have been raised to us. In short, we do not believe that VW is in violation of EPA's service information regulations based on the the information we have been provided to date. Please read through this and if you have any questions or additional information you would like us to consider, please let me know.

Regards,

Holly Pugliese
US EPA

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	12/28/2009 01:53 PM

Subject: Fwd: update on EPA discussion with VW

Hello Mrs. Pugliese EPA US Federal Government,

I have left 3 phone messages in your office since the end of Oct. With the last one today being left.

Is there anything to report on the status of this situation?

VW-Audi yet again has modified the procedure of which to perform the actions required and still have not made available an SVM program with Geko program that is in the same fair competition manner as there franchises to the aftermarket repair shop.

They have changed suppliers and criteria in which they supply information again.

I have been told via a letter they will no longer supply technical bulletins in the manner they have in the past.
Keep in mind these bulletins are the ones we submitted to you with the evidence supplied.

What are you doing about this?

When do I get a username and password to access SVM Geko, the same information and repair procedures/instructions for the factory scanner I purchased from VW-Audi at not a reduced price that was registered with the EPA? In the same manner as a franchise with all required data in order to perform repairs.

Best Regards,
Jack Shapiro

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Sent: Thu, Oct 15, 2009 1:04 pm
Subject: Re: update on EPA discussion with VW

Hi Jack and thanks for the additional info. I don't have anything in writing to share with you at this point. We have had a few conference calls and EPA is analyzing the situation so we can make a decision. I don't think I need anything else from you at this point, I have all of the the e-mails you sent to Jim Clyne so I will keep you posted.

Thanks.

Holly

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	10/14/2009 12:18 PM
Subject:	Re: update on EPA discussion with VW

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t Hello Mrs. Pugliese,

This is not just about service information.
It was also in regards to the factory tester not being supported which I purchased from them and a subscription I'm currently maintaining. However I'm not getting nor have I been given access to the same services as the dealer level for the machine. User name and password for GEKO and SVM server access in order to configure control units and marry immoblizers. They are separate services.

Has VW-Audi provided you with any documentation that I may review so I may further research what they state in writing to you?

I am beyond confident I can prove what I have submitted already.
If you require any information or an outside understanding of a service please ask me.
It is my understanding that VW-Audi has purposely tried to convolute the data in order to make it seem like they comply to the EPA and Federal Government when they clearly do not with there Geko program.

I am clearly not referring to Pass-Thru in regards to the functions of the factory tester that have been denied to me. Pass-Thru has only recently become available and the services are still not there I describe. This data has been withheld from me for several years.

Additionally I purchased a life membership for Geko through Resolve Archway Corp on behalf of VW-Audi many years ago. I have already passed a back ground check, am bonded in the state of NY Licensed as a retail repair facility and dealer. They are now trying to change these conditions along with make me sign a different contract using a Pass-Thru device.

I request you enforce them to make the machine VAS 5052 supported as there dealers use that I purchased with the same services extended to me with continuity.

Please advise

Best,

Jack Shapiro

European Parts Emporium
1001 State Route 17K
Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL
845-457-9462
845-457-9461 FAX

NYS DMV LIC # 7076062

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: jjclyne@gw.dec.state.ny.us
Sent: Wed, Oct 14, 2009 11:31 am
Subject: update on EPA discussion with VW

Hello Mr. Shapiro. This is a quick note to let you know that EPA is in conversations with VW on the recent issues you raised regarding the availability of their service information. We haven't come to any conclusions yet, but I will keep you posted. If you have any questions in the meantime, please contact me directly.

Regards,

Holly Pugliese
US EPA
734-214-4288
pugliese.holly@epa.gov

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Tuesday, May 11, 2010 2:50 PM
To: Immekus, Kurt; VWoA Tech Info; vwgoa@arvatousa.com
Cc: Pugliese.Holly@epamail.epa.gov
Subject: Fwd: New VW and Audi Immobilizer Program GEKO ID request

Hello Kurt, Vwgoa, Arvato,

Correction, Uwe Ross said you left him a message on Thursday the 6th, he was on vacation.
He has advised me he will be returning your call.
To keep you advised of what I have knowledge of.
However, Mr. Bierdümpfel has not received an inquiry according to him.
Please see his e-mail below.

Best,
Jack Shapiro

-----Original Message-----
From: vwemporium@aol.com
To: Kurt.Immekus@vw.com
Cc: Pugliese.Holly@epamail.epa.gov; Uwe@Ross-Tech.com
Sent: Fri, May 7, 2010 10:47 am
Subject: Fwd: New VW and Audi Immobilizer Program GEKO ID request
Hello Kurt,

Maybe they have not returned your call or inquiry because there was not one according to them.
Just in case.
Here is an e-mail from Mr. Bierdümpfel.

Additionally.

Contact information for Uwe Ross.

Uwe Ross
Ross-Tech
Uwe@ross-tech.com
Work 267-638-2300 ext 110

Best,

Jack Shapiro

-----Original Message-----
From: KARLYN16@aol.com
To: vwemporium@aol.com
Cc: Kurt.Immekus@vw.com
Sent: Fri, May 7, 2010 10:29 am
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request
Hello Jack,
Nobody from VW has contacted me about your references.
They are welcome to contact me at anytime.

Best Regards,
Karl
Karl Bierdümpfel
Karlyn Industries Inc.
(845) 351-2249

In a message dated 5/7/2010 10:21:54 A.M. Eastern Daylight Time, vwemporium@aol.com writes:

> Hello Karl,
>
> VW says you haven't given a reference or returned there contact.
>
> Please advise,
>
> best,
> Jack Shapiro

-----Original Message-----
From: Immekus, Kurt <Kurt.Immekus@vw.com>
To: vwemporium@aol.com
Sent: Fri, May 7, 2010 7:43 am
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request
The ID usually takes a couple of weeks, plus I haven't heard back from your references.
Thank You for asking

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Thursday, May 06, 2010 4:55 PM
To: Immekus, Kurt; vwgoa@arvatousa.com; VWoA Tech Info
Cc: Pugliese.Holly@epamail.epa.gov
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request

Hello Kurt, Arvato, Vw-techinfo,

It has been over three days. What is the status of the application for Geko.
Do you require anything else?

Please advise,

Best,
Jack Shapiro

-----Original Message-----
From: Immekus, Kurt <Kurt.Immekus@vw.com>
To: vwemporium@aol.com
Sent: Fri, Apr 30, 2010 3:17 pm
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request
Thanks Jack
We will begin processing
Regards
Kurt

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Friday, April 30, 2010 3:05 PM
To: Immekus, Kurt
Cc: VWoA Tech Info; vwgoa@arvatousa.com; Pugliese.Holly@epamail.epa.gov
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request

VWGoA,

Arvato,

Techinfo,

Hello Kurt,

You should know this.

One of the documents you sent is corrupt. I was able to fix and print via paint.
The fields were all screwy. I attached a repaired one for you as well in fixed_doc.PNG.

I sent my documents via fax.

Here they are again just in case attached labeled
Jack_Shapiro_LSID_S8MV2T35_NYS_7076062_IRF_403738.pdf

Best,
Jack Shapiro

European Parts Emporium
1001 State Route 17K
Montgomery New York 12549 USA

845-457-9808 TEL.
845-457-9461 FAX

vwemporium@aol.com

7076062 NYS DMV LICENSE
IRF 403738
FED/NYS Tax ID 14-178-8811
NASTF LSID # S8MV2T35

-----Original Message-----
From: Immekus, Kurt <Kurt.Immekus@vw.com>
To: vwemporium@aol.com
Sent: Thu, Apr 29, 2010 1:59 pm
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request
Hello,
Fill out the two attached forms and fax them back to the Fax number provided.
Thank You
Erwin Support

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Thursday, April 29, 2010 12:27 PM
To: Immekus, Kurt; vwgoa@arvatousa.com; VWoA Tech Info
Cc: Pugliese.Holly@epamail.epa.gov
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request

Hello VW-Audi Arvato, Kurt, Eddie

I would like my account activated for username and password for my VAS5052 for GEKO

My NASTF LSID # s8mv2t35

My IRF # is 403738

I am currently registered for the older Geko program for remote take over access.

Please advise of any additional information you require.

Regards,

Jack Shapiro

Euopean Parts Emporium
1001 State Route 17K
Montgomery New York 12549 USA

845-457-9808 TEL
845-457-9461 FAX
vwemporium@aol.com

-----Original Message-----
From: Immekus, Kurt <Kurt.Immekus@vw.com>
To: vwemporium@aol.com; vwgoa@arvatousa.com; VWoA Tech Info <TechInfo@vw.com>
Cc: Pugliese.Holly@epamail.epa.gov; Chris.White@mail.house.gov
Sent: Wed, Mar 31, 2010 7:32 am
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request

Hello Jack,
As explained in the communications distributed last year, to get a security ID for the laptop based system you still need to fill out the application forms listed in the 2010 Immobilizer instructions under the reprogramming heading on the home page of the web site. To get a Geko Id for your VAS device which includes access to security features you must participate in the NASTF secure data release model by completing the application for a Locksmith ID.
Thank You
Kurt Immekus

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Tuesday, March 30, 2010 6:35 PM
To: vwgoa@arvatousa.com; VWoA Tech Info; Immekus, Kurt
Cc: Pugliese.Holly@epamail.epa.gov; Chris.White@mail.house.gov
Subject: Fwd: New VW and Audi Immobilizer Program GEKO ID request

Hello Eddie, Kurt, and whom it may concern @ VW-Audi

Kurt I have left you a voice mail @ 4:10PM today in regards to this.

I require a user name and password for both **Pass-thru and the VAS 5052 for GEKO** so please don't be confused.

I own both a VAS 5052 and a ACTIA Pass-Thru XS device.

I am currently registered for the GEKO pin program for 2009 and earler vehicles for remote take over access of my VAS 5052 tester.

This is part 2 of the document provided by the EPA but it is not referenced on your web site with continuity in regards to the VAS testers.

2010 model year vehicles and later:
o Immobilizer reprogramming is done directly via the Erwin site and does not require interaction with the fulfillment house and is $29.95 per instance
o The process can either be done with a ***VAS 5052 or a J2534 pass-thru*** cable and a laptop for shops who do not own the VW specific tool.
o A GeKo ID is required for this process. Aftermarket shops who are already registered will need to re-register with VW, but do not have to pay the $100 fee. A shop who has never registered with VW will need to do so and pay the one time $100 fee.

Eddie I don't understand how you could not understand what I was asking but you can see below the Geko information is to be requested from you for 2010 and newer vehicles from Arvato.

It doesn't include the VAS 5052 so maybe this is where you may have misunderstood me in the prior e-mail.
https://erwin.vw.com/erwin/showVasIndex.do

Again please escalate this matter because I have been requesting this data since 2008 OCT>

I have now sent in two applications to Resolve corp in AUG of 2009 and Dec 2009 with no response. I also tried in AUG of 2009 to register with the NASTF but they were not ready before you released the program data criteria which you changed anyway.
I have correspondense from the CEO of the NASTF to back up what I'm saying.

If there is documetation or fees required please advise.

Regards,

Jack Shapiro

European Parts Emporium
1001 State Route 17K
Montgomery New York 12549 USA

845-457-9808 TEL
845-457-9461 FAX
vwemporium@aol.com

Important:

For pre 2010 pass-thru Immobilizer Instructions please read the following document:
VW Revised Immobilizer Service Program for independent Workshops.

For 2010 and beyond pass-thru Immobilizer Instructions, please read and follow the directions below.

Overview - Introduction

The Anti-theft Immobilizer system on Audi, Bentley, Lamborghini and Volkswagen vehicles, prevents the engine from being started by unauthorized means.
Some vehicle electrical system control modules that monitor or control engine emissions, as well as some related modules, are integrated with the Anti-theft Immobilizer system.

Table of Contents

- Introduction: Before you Begin
- Devices: Recommended Pass-Thru Devices
- Setup: Immobilizer PC Setup

Step by Step

- ○ Step 1: Complete Pass-Thru Enrollment Forms
- ○ Step 2: Install VWGoA Certificate
- ○ Step 3: Register for erWin
- ○ Step 4: Download VAS for PC Base Software
- ○ Step 5: Download VAS for PC Brand Software
- ○ Step 6: Purchasing a 24 Hour Immobilizer License
- ○ Step 7: Perform Immobilizer Adaption

Before You can Replace an emission part

Should an emissions related control module that is integrated with the anti-theft immobilizer system require replacement, the new module must be adapted to the anti-theft immobilizer system. Adaptation is required for secure data communication between all vehicle system modules that are integrated with the immobilizer system. Module examples are: Engine Control Module (ECM) and Transmission Control Module (TCM), anti-theft immobilizer control module or instrument cluster, and vehicle keys.
The VAS for PC software enables immobilizer adaptation of applicable control modules on *m.y. 2010 and newer*, Audi, Bentley, Lamborghini and Volkswagen vehicles. Users are guided through the adaptation process via an interactive graphics and text interface.
Requirements for using the VAS for PC software:

- You have enrolled into the program Step 1: Complete Pass Thru Enrollment Forms
- You have received an email from VWGoA that contains a Security ID and Password to access the immobilizer application hosted in Germany
- You have received an email from VWGoA that contains a certificate file (e.g.

IndepeDeale.30001.300999.pfx)

- You have installed the certificate onto your PC
- You have obtained a J 2534-1 Pass Thru device Recommend Devices
- You have the JVM 1.4.2_15 or later installed on your PC: For the latest Java update, click http://www.java.com
- Your computer environment meets the requirements outlined in Immobilizer for PC Setup

Recommended J 25434-1 Pass-Thru devices

Pass thru devices are available for purchase from a recommended Manufacturer for registered workshops to perform Immobilizer functions. The Pass Thru devices that have been tested to work with VAS for PC follow:

- Passthru+ XS (Firma: I+ME ACTIA GmbH): Firmware 2.07o, Driver 2.07p
  Available from ACTIA Corp.
  http://www.passthruxs.com or (734) 266-2083
- CarDAQ-Plus cable bundle (Drew Technologies): Firmware 01.09.14, Driver 01.09.16
  Available from Drew Technologies, Inc.
  http://www.drewtech.com or (734) 222-5228
- iFlash 2534 Global Programmer (Bluestreak): Firmware 2.11, Driver 5.20
  Available from Blue Streak Electronics
  http://www.bsecorp.com or (905) 669-4812
  Email at Info@bsecorp.com
- VSI-2534 Vehicle Connection (Dearborn Group Technology): Firmware 1_112, Driver 2_05_22
  Available from Dearborn Group Technology
  http://www.dgtech.com/

Notes:

- Currently, Pass Thru re-programming supports SAE J2534-1 version 4.04 only.
- Please ensure that you have installed the appropriate driver for your Pass Thru device.
- For details read the documentation shipped with your device or contact the manufacturer.

Immobilizer for PC Setup

Minimum System Requirements

PC:

- CPU 1.7 GHZ
- RAM 1 GB
- Graphics 1024x768
- Hard Disk 10 GB Available
- USB USB connection for Pass-Thru-Box
- DVD
- LAN 100 Mb Broadband

Diagnostics:

- J 2543-1 Pass Thru device
- Battery Charger connected to vehicle during adaption

Warning:

- VAS adaption drains car batteries very quickly. If the battery charge depletes before adaption finishes, permanent damage to modules integrated with the immobilizer system could occur.

Software:

- Windows XP Professional (Service Pack 2) OR Windows 2000 (SP 4)
- VAS for PC Base CD or erWIN download (v16.12 or later)
- VAS for PC Make CD(s) or erWIN download (Audi, Bentley, Lamborghini, and/or VW)
- Microsoft Internet Explorer 6.0 SP 2, plus:
  - Microsoft XML Parser 4.0 SP2
  - Adobe Acrobat Reader 5.05
  - Java 2 Runtime Environment 1.4.2_15. For the latest Java update, click http://www.java.com

VAS for PC System Limitations

The VAS for PC application is designed to adapt modules to the anti-theft immobilizer system on MY 2010 or later vehicles only. The software must be run when replacing emissions related parts such as the ECM, TCM, IC, vehicle keys, and the anti-theft immobilizer control module. This software package includes the following product components:

- VAS for PC Base software (Ver. 16.12 or later)
- VAS for PC Make software matching the brand(s) you repair: Audi, Bentley, Lamborghini, and/or VW.

Note:
Using this product for any purpose other than adapting emissions related parts to the immobilizer system is not recommended or supported.
Link to Manuals: Siemens VAS for PC Manual, Quick Reference and Troubleshooting document

---

Step 1: Complete Pass Thru Enrollment Forms

What's needed?

- You must have a broadband internet connection
- You must be a licensed Independent Workshop with a Windows 2000 or XP computer see minimum requirements

How?

Step 1. Contact: Arvato at (800) 544-8021 or Mail to: vwgoa@arvatousa.com
Arvato will provide you with the following enrollment forms.

- VWGoA Immobilizer Service Application
- VWGoA Network Security ID Request form

Step 2. You must complete and submit the forms along with your business license documentation and a $100.00 Application Fee.
Notes: Your application will be approved within 5 business days of receiving the application fee. If denied, an explanation and full refund will be provided.
For approved applications, there is an additional 72 hour processing period required to issue your workshop a Network Security ID and Password.
An approved registration is good for 18 months from the time of application.
Step 3. Once approved you will receive 3 emails from VWGoA Information.security@vw.com. The emails will contain the following:

- Your VWGoA Certificate (e.g. IndepeDeale.30001.300999.pfx)
- Your Network Security User ID
- Your Network Security Password (sent in a separate email for security reasons)

Step 4. Install the VWGoA Certificate into your Windows Certificate Store Step 2: Install VWGoA Certificate

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Step 2: Install VWGoA Certificate

What's needed?

- You must have received a certificate from Information.security@vw.com.
- You must have administrator access to your PC

How?

Step 1.

- Open the email sent to you from Information.security@vw.com that contains the cetificate file.
- The email attachment you receive will follow a naming convention that looks similar to the following: IndepeDeale.30000.60599.pfx.

Notes about the Certificate Import Wizard:

- On the "File To" Import screen, click Browse to locate the certificate file on your desktop or in the folder you created.

- On the "Password" screen, leave all the fields blank, and then click Next.li>
- On the Certificate Store Screen, check the "Automatically select the certificate store based on the type of certificate"

- Download the VAS for PC software from erWIN Step 4: Download VAW for PC Base Software from erWin

---

Step 3: Register for erWin

What's needed?

- You must have a broadband internet connection

How?

Step 1. Logon to the erWin site branded for the type of vehicle you repair.

- For Audi, Bentley, and/or Lamborghini, your erWIN site is: http://erwin.audiusa.com
- For VW brand vehicles, your erWIN site is: http://erwin.vw.com

Step 3. Complete the registration information, and then check the VWGoA terms and agreements stipulated by VWGoA and the erWIN distribution site (i.e. arvato).

Step 4: Download VAS for PC Base Software from erWin

What's needed?

- You must have previously installed the certificate you received from Information.security@vw.com. See Step 2.
- You must have administrator access to your PC and uninterrupted broadband access to the Internet

  Note: Alternatively, you can order a CD from arvato by calling 800 544-8021 or requesting a

CD by email (vwgoa@arvatousa.com).

- You must have previously installed JVM 1.4.2_15 on your PC to update your Java version, click http://java.com and select Free Download.

How?

Step 1. Open the erWIN website dedicated to the brand of vehicle your workshop repairs.

- If you repair VW cars, click http://erwin.vw.com
- If you repair Audi, Bentley, or Lamborghini cars, click http://erwin.audiusa.com

Step 2. Click Reprogramming from the menu on the right-side of the page (Audi) or top of the page (VW), and then double-click the *"Immobilizer SW Download"* option:

Notes about Base Software Installation:

- In the figure above, the latest version is "Adaption Functions, base data version V16.12". Yours might be different
- When browsing for a folder to download the software into, remember where it is located. You'll need to find it to later to install the VAS for PC software onto your PC

Step 4. Locate the folder where the software was downloaded, and then double-click the file to start the VAS for PC Base CD installation process.
The installation process should look similar to the following:
Notes:

- There might be as many as 3 items placed on your Windows Desktop and Start Menu. The icon you want is labeled, "Adaption functions," which will run the VAS for PC software
- For information on the other items you see (e.g. VC Configurator and DTS folder), refer to the VAS for PC manual

Step 6. Return to erWin website and download the brand software modules that correspond to the types of cars you repair. Step 5:Download VAS for PC Brand software from erWIN

Step 5: Download VAS for PC Brand software from erWin

What's needed

- You must have previously installed the certificate you received from Information.security@vw.com Step 2: Certificate Installation
- You must have downloaded and successfully installed the VAS for PC base software Step 4: Download VAS for PC Base Software from erWin

How?

Step 1. To install the Brand CD, open the erWIN website dedicated to the brand of vehicle your workshop repairs.

- If you repair VW cars, click http://erwin.vw.com
- If you repair Audi, Bentley, or Lamborghini cars, click http://erwin.audiusa.com

Step 2. Click Reprogramming from the menu on the right-side of the page (Audi) or top of the page (VW), and then click the *"Immobilizer SW Download"* option:

- When browsing for a folder to download to, remember where it is located. You'll need to find it later to install the VAS for PC software onto your PC.

Notes about Brand Software Unzipping

- Many files will be added to the folder you choose. Remember this folder because you'll need it later when you add brand adaption functions to your VAS for PC software.

Step 8. If you're ready for immobilizer adaption, purchase a license from the erWin web site. Step 6: Purchasing a 24 Hour Immobilizer License

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Step 6: Purchasing a 24 Hour Immobilizer License

What's needed?

- You must have previously installed the certificate you received from Information.security@vw.com Step 2: Intsall VWGoA Certificate
- You must be a registered erWin user Step 3: Register for erWin
- You must have received an email from Information.security@vw.com containing a Network Security ID and Password
- You must have downloaded and successfully installed the VAS for PC base software Step 4: Download VAS for PC Base Software from erWin
- You must have downloaded and successfully installed the VAS for PC brand software Step 5: Download VAS for PC Brand Software from erWin

How?

Step 1. Logon to the erWin website dedicated to the brand of vehicle your workshop repairs.

- If you repair VW cars, click http://erwin.vw.com
- If you repair Audi, Bentley, or Lamborghini cars, click http://erwin.audiusa.com

Step 2. Click Reprogramming from the menu on the right-side of the page (Audi) or top of the page (VW), and then click the *"Immobilizer License Order"* option:

Step 3. Select the duration of the VAS for PC license you want to purchase from the drop-down menu provided.
At this time, the only duration available is 24 hours.

Step 4. If you have a MY 2010 vehicle ready for immobilizer adaption, see Step 7: Perform Immobilizer Adaption

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Step 7: Perform Immobilizer Adaption

What's needed?

- You must have previously installed the certificate you received from Information.security@vw.com Step 2: Install VWGoA Certificate
- You must be a registered erWin user Step 3: Register for erWin
- You must have received an email from Information.security@vw.com containing a Network Security ID and Password
- You must have downloaded and successfully installed the VAS for PC base software Step 4: Download VAS for PC Base Software from erWin
- You must have downloaded and successfully installed the VAS for PC brand software Step 5: Download VAS for PC Brand Software from erWin
- You must have a valid 24 Hour immobilizer reset license Step 6: Purchasing a 24 Hour Immobilizer License
- You must have a *MY 2010 or later vehicle* repaired and attached to the VAS for PC computer you are using.

How?

Step 1. Follow the adaption immobilizer instructions described in the VAS for PC Quick Reference document..
Note:

- If you need more information on how the VAS for PC software functions than what is covered in the Guided Tour document, refer to the VWGoA VAS for PC Manual.

-----Original Message-----
From: vwemporium@aol.com
To: vwgoa@arvatousa.com
Cc: Pugliese.Holly@epamail.epa.gov; Chris.White@mail.house.gov; techinfo@vw.com
Sent: Tue, Mar 30, 2010 11:49 am
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request
Hello Eddie

This is correct. But not without remote access and not for 2010 vehicles or newer

I however don't have a GEKO username and password for the VAS 5052 for 2010 and newer vehicles or earlier.

Could you please provide so I may perform tasks like other independents are claiming they now have access to without remote access appointment.

It is also what has been being promised since 2008 but has never been made available.

Could you please call me. @ TEL 845-457-9808

I have contacted Kurt Immekus directly, he had claimed it didn't exist. Like he did to the person I spoke to last night which is an independent GEKO user without restriction, he claims now but took him six or better months to get and it recently appeared in Jan of 2010 after contacting someone here at Arvato/VW-Audi complaining.

Please provide Username and password or requirements to achieve this task.

Best,
Jack Shapiro

-----Original Message-----
From: Mailbox, Volkswagen, arvato digital services llc <vwgoa@arvatousa.com>
To: vwemporium@aol.com <vwemporium@aol.com>
Sent: Tue, Mar 30, 2010 11:23 am
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request
Hello Jack,

Thank you for contacting the Volkswagen / Audi Technical Literature Ordering Center.

I am afraid I do not understand your request. If you are requesting login credentials in order to place orders for Immobilizer or Radio codes, please note that you are not required to login. My records indicate that you are actively enrolled in the program, and are able to place orders as needed for future code adaptations. To do this, please simply follow these steps:

1. Access the Literature Portal that corresponds to the Make of the vehicle your would like a code for- either https://www.vw.techliterature.com or https://www.audi.techliterature.com
2. Click to "Enter Consumer Website"
3. In the "Keyword Search" field, enter "radiosupport" and click "Search"
4. Add the search result to your cart, and click next to complete the ordering process

Each order instance will cost $29.95 and is payable by credit card.

Please feel free to respond to this message if I have not addressed your inquiry, if you need further assistance, or with any further questions.

Best Regards,

Eddie
Volkswagen / Audi Technical Literature Ordering Center
vwgoa@arvatousa.com

From: vwemporium@aol.com [mailto:vwemporium@aol.com]

Sent: Tuesday, March 30, 2010 6:49 AM
To: Mailbox, Volkswagen, arvato digital services llc
Cc: Pugliese.Holly@epamail.epa.gov; techinfo@vw.com; Chris.White@mail.house.gov
Subject: Fwd: New VW and Audi Immobilizer Program GEKO ID request
Hello Arvato USA on behalf of VW-Audi of North America.

I require a username and password for GEKO and SVM to support the functions of my VAS 5052 Tester.
I have attached the correspondence from the EPA in regards to what is required.

I am already a GEKO user and have been on the PIN program from the start of it.

My tester # is registered with VW-Audi.
I am exempt from the 100USD fee for application as I am a life member.

Please provide detailed instructions and what is required if any other fees in order to expedite the process as VW has changed companies from Resolve Archway to you.

The process was detailed in July of 2009, was not active with the attributes changed for the NASTF with a dead end/ Documented.
The process with links from VW techinfo@vw.com were not active at time of e-mail sent below in 2009 of DEC./Documented.

I have been requesting a username and password for GEKO since 2008 Oct>

Regards,

Jack Shapiro

European Parts Emporium
1001 State Route 17K
Montgomery New York 12549 USA
NYS DMV Repair LIC # 7076062

845-457-9808 TEL
845-457-9461 FAX
vwemporium@aol.com

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: Chris.White@mail.house.gov
Sent: Thu, Jan 7, 2010 3:10 pm
Subject: Re: Fwd: update on EPA discussion with VW

Mr. Shaprio. Attached is a summary of EPA's finding regarding the VW issues that have been raised to us. In short, we do not believe that VW is in violation of EPA's service information regulations based on the the information we have been provided to date. Please read through this and if you have any questions or additional information you would like us to consider, please let me know.

Regards,

Holly Pugliese
US EPA

From: vwemporium@aol.com

To: Holly Pugliese/AA/USEPA/US@EPA

Cc: Chris.White@mail.house.gov

Date: 12/28/2009 01:53 PM

Subject: Fwd: update on EPA discussion with VW

-----Original Message-----
From: VWoA Tech Info <TechInfo@vw.com>
To: 12Vdoc@gmail.com; 35jandj@optimum.net; aaforeign@hotmail.com; alan@bridgewatermotorworks.com; alex_locks@yahoo.com; animasautomotive@msn.com; arkco00368@yahoo.com; armand@gfautomobiles.com; autoimport1@sbcglobal.net; autolegend@comcast.net; autolox@comcast.net; autosafety@msn.com; autotech2go@gmail.com; autowerkes@roadrunner.com; autoy58@yahoo.com; avsauto@comcast.net; baydiagnostic@aol.com; Beachhouseimportsusa@yahoo.com; beetleclinic@rcn.com; Berrylocksmith@aol.com; bill@lock.com; bryan@rmotorcars.com; bryannystrom@msn.com; bsorkhe@aol.com; BtoB@roadrunner.com; bwbeetle@msn.com; chkengine@yahoo.com; colin@affinitiveauto.com; DaveLee@mgautowholesale.com; dg1brandt@kcnet.com; dlee7883@optonline.net; DrPeter@excite.com; dstrieder@msn.com; earl@huberauto.com; eddiedellz@yahoo.com; EQMain@euroquattro.com; estimates@alexsautohaus.com; europart@pacbell.net; eute321@aol.com; example7751@sbcglobal.net; fares2870@yahoo.com; geraragon@hotmail.com; germanca@isomedia.com; germanconcepts@comcast.net; globalautoelectric@gmail.com; gordon.rudolph@taeaudio.com; GSMWERK@YAHOO.com; hessy@volxgerman.com; hillbros@pacbell.net; hitechautomotive@clearwire.net; Hvautoelectric@AOL.com; info@executiveautogallery.com; info@fairfieldcountymotorsport.com; info@hillsideimports.com; ingolstadtwest@yahoo.co.uk; iwaldman@comcast.net; jacob@mississaugaautocentre.ca; jbeckius@centreoftherockies.com; jennifer@vwerks.com; jjautobody@sbcglobal.net; jkautomotive@hotmail.com; JM2674@msn.com; josserman@SelectEuroCars.com; Jpmaui@optonline.net; keymanmike@juno.com; keystoneautoservice@pacbell.net; labarslockshop@comcast.net; lifetimesecurity@qwestoffice.net; lostcabin@mac.com; mark@mittlermotors.net; markcerv@aol.com; Matt@eurotechofholland.com; mbener@carmadillo.com; migeli@yahoo.com; millbrookimports@madriver.com; mpal6703@yahoo.com; murphyvw@earthlink.net; mygarageinc@msn.com; nicholsshop@ucom.net; oldwickvillage@earthlink.net; parkav13@hotmail.com; pat@pro-imports.com; pdqlockservice@aol.com; peggygagnon@verizon.net; philsautos@aol.com; plano@autoscopeltd.com; poojitha.dahanaike@servicesolutions.spx.com; premierauto@bellsouth.net; Purcell@qx.net; qicpic@bellsouth.net; r@ea-w.com; raulb@bellsouth.net; Richard.Harger@cox.com; richkstrotz@keithcoxautobahn.com; RPWerner@aol.com; rwittler@comcast.net; rwsie@clear.net; sales@bernhards.com; sevan@integritymotorcar.com; skiking1@hotmail.com; sloanavs@aol.com; smdiagnostics@optonline.net; steveb@atlantic.net; TC2869@msn.com; Teimc@verizon.net; theautoclinic@sbcglobal.net; thekidsgarage@hotmail.com; tonybranch33@juno.com; tramies@pvgarage.com; vwemporium@aol.com; vwhoward@wagenwerx.com; vwkoda09@aol.com; walter@universalimports.com; Werner.Huber@AUDI.DE;

whiteknightlocks@aol.com; xgdon@hotmail.com; yinyang@earthlink.net; zamorasm@msn.com
Sent: Wed, Dec 2, 2009 10:03 am
Subject: New VW and Audi Immobilizer Program
To: All VW and Audi Registered Independent Repair Shops.
Subject: New Immobilizer Program
Effective Immediately Resolve / Archway will no longer be accepting Immobilizer Adaption requests. Volkswagen and Audi has a new vendor for these services, Arvato. As a result the process has changed.
Obtaining an immobilizer adaptation requires access to a tester configured with a certificate for use with the GeKo system, a high speed internet connection and additional information identifying both the vehicle and workshop to maintain security. The adaptation is only valid for the vehicle it is being performed on at the time it is being performed. The certificate download to your e-mail address will occur within a half an hour of the adaptation request.
1. Registered workshops: request an immobilizer adaptation by purchasing on-line through: www.vw.techliterature.com/consumer/home.aspx or
www.audi.techliterature.com/consumer/home.aspx
Open the web site and select "Consumer Portal", Enter "Diagnostics" in the literature type. Do not fill in any of the other search categories.
2. When in the VW site, search for code VWIMMRADIOSUPPORT.
3. When in the Audi site, search for code AUIMMRADIOSUPPORT
- Immobilizer adaptation fee of $29.95 will apply for each adaptation ordered by the workshop.
4. Upon checkout, you will receive an acknowledgement email that the order is in process.
5. Arvato will call the independent shop to request the Vehicle VIN# and other important information.
- Hours of operation are 7AM to 5PM PST
6. Arvato Immobilizer Support immediately contacts VWGoA with an immobilizer adaptation and certificate download request
7. VWGoA calls the requesting registered workshop and completes the adaptation procedure.
- If the vehicle has been reported as stolen, no immobilizer adaptation will be given

For complete program details, please see the attached document.
Thank you
Volkswagen / Audi Immobilizer Support

<<Pre 2010 Immobilizer Service Program for Independent Workshops.pdf>>

-----Original Message-----
From: Pugliese.Holly <Pugliese.Holly@epamail.epa.gov>
To: vwemporium <vwemporium@aol.com>
Sent: Thu, Oct 14, 2010 9:27 am
Subject: Re: EMISSIONS FRAUD ! ATTENTION EPA

Hi Jack. Thanks for sending this. I have turned it over to our Enforcement Office.. They have brought cases against several other companies like this and I'm sure they will be interested in this one as well if they aren't already aware of it.

Holly A. Pugliese
US EPA
Office of Transportation and Air Quality
734.214.4288
pugliese.holly@epa.gov

From: vwemporium@aol.com

To:	Holly Pugliese/AA/USEPA/US@EPA
Date:	10/12/2010 02:47 PM
Subject:	EMISSIONS FRAUD ! ATTENTION EPA

Hello Holly

Please tell these guys to stop selling this stuff. It is used for nothing other then circumventing an emission device.

http://store.42draftdesigns.com/O2-Sensor-Spacer_p_306.html

http://forums.vwvortex.com/showthread.php?5049214-P0420-on-2001-Jetta-1.8T&p=67944508#post67944508

If you could just drop someone like this a an email. I bet you could scare a difference :)

Flying back from NASTF and CARS meeting Vegas for Right to Repair Act meeting, so I was helping people fix there dirty cars via the long flight home.

Thank you again by the way with the help getting VW-Audi to sort of comply.

It seems they are being very difficult with releasing the required information to repair cars safe and clean.

Cheers.

Jack Shapiro

European Parts Emporium
1001 State Route 17K
Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL
845-457-9461 FAX

-----Original Message-----
From: vwemporium <vwemporium@aol.com>
To: mcdaniel.doug <mcdaniel.doug@epa.gov>
Sent: Sat, Jan 19, 2013 10:37 pm
Subject: Fwd: Some key points of interest EPA emission violations.

For your pleasure Doug,
Happy 2013

Jack Shapiro E.P.E.
VAS>Geko ASE Extern
7076062 NYS DMV

SAE>NASTF

European Parts Emporium
Immobilizer Solutions
1001 State Route 17K
Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL/FAX
845-784-0564 Net

-----Original Message-----
From: vwemporium <vwemporium@aol.com>
To: Pugliese.Holly <Pugliese.Holly@epamail.epa.gov>; vwemporium <vwemporium@aol.com>; Chris.White <Chris.White@mail.house.gov>
Sent: Sat, Jan 19, 2013 10:34 pm
Subject: Some key points of interest EPA emission violations.

Good Job, Holly,
Happy 2013!

http://www.epa.gov/enforcement/air/cases/edgeproducts.html

You may want to take a look a little over here.

One of the largest perpetrators of what I have to undo for VW-Audi-Porsche.

They hide behind the fact they are in Canada.

http://www.unitronic-chipped.com/

They make an appearance, in force,.... at a show called Waterfest, (a VW car show) in the USA Englishtown OLD BRIDGE TOWNSHIP NJ every year.
They make an extra effort, to make kids believe that deleting all the emission devices should be done, and offer the services to do so.

http://www.waterfest.net/

I bet if you did a walk through at this show, you could clean up a large portion of this, or at the very least, investigate it.

Simply put, I am tired of people coming in and saying "oh I wont fix my car I will just delete it because its cheaper".
It hurts my economy for repairs.

Just my two cents below.

It would be helpful if the EPA would dispatch a letter to all State DMV agencies.
That a clear of the fault memory should be performed at end of State DMV IM SMOG inspection, read VIA the OBD2 and then recheck the readiness status VIA the OBD2. It is my experience that cars such as

the company above, set the Readiness bits to ready always. This would help fail cars that clearly have been modified and generate monies for fines etc.

Best,

Jack Shapiro E.P.E.
VAS>Geko ASE Extern
7076062 NYS DMV
SAE>NASTF

European Parts Emporium
Immobilizer Solutions
1001 State Route 17K
Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL/FAX
845-784-0564 Net

AO 440 (Rev. 12/09) Summons in a Civil Action

UNITED STATES DISTRICT COURT

for the

Southern District of New York

RTK Technologies Limited

Plaintiff

v.

Jack Shapiro

Defendant

Civil Action No. 15-CV-05157-KMK

SUMMONS IN A CIVIL ACTION

To: *(Defendant's name and address)* Jack Shapiro
1001 State Route 17K
Montgomery, New York 12549

A lawsuit has been filed against you.

Within 21 days after service of this summons on you (not counting the day you received it) — or 60 days if you are the United States or a United States agency, or an officer or employee of the United States described in Fed. R. Civ. P. 12 (a)(2) or (3) — you must serve on the plaintiff an answer to the attached complaint or a motion under Rule 12 of the Federal Rules of Civil Procedure. The answer or motion must be served on the plaintiff or plaintiff's attorney, whose name and address are:

Melissa A. Pena
Ami Bhatt
Norris, McLaughlin & Marcus, P.A.
875 Third Ave., 8th Floor
New York, New York 10022

If you fail to respond, judgment by default will be entered against you for the relief demanded in the complaint. You also must file your answer or motion with the court.

CLERK OF COURT

Date: _____

_____
Signature of Clerk or Deputy Clerk

Civil Action No.

PROOF OF SERVICE

(This section should not be filed with the court unless required by Fed. R. Civ. P. 4 (l))

This summons for *(name of individual and title, if any)* _____

was received by me on *(date)* _____ .

❒ I personally served the summons on the individual at *(place)* _____

_____ on *(date)* _____ ; or

❒ I left the summons at the individual's residence or usual place of abode with *(name)* _____

_____ , a person of suitable age and discretion who resides there,

on *(date)* _____ , and mailed a copy to the individual's last known address; or

❒ I served the summons on *(name of individual)* _____ , who is

designated by law to accept service of process on behalf of *(name of organization)* _____

_____ on *(date)* _____ ; or

❒ I returned the summons unexecuted because _____ ; or

❒ Other *(specify):*

.

My fees are $ _____ for travel and $ _____ for services, for a total of $ 0.00 .

I declare under penalty of perjury that this information is true.

Date: _____ _____

Server's signature

_____

Printed name and title

_____

Server's address

Additional information regarding attempted service, etc:

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

RTK TECHNOLOGIES LIMITED, Plaintiff, v. JACK SHAPIRO, Defendant.	Civil Action No. 15-cv-05157 (KMK) **AMENDED COMPLAINT** **DEMAND FOR JURY TRIAL**

Plaintiff, RTK Technologies Limited ("Plaintiff" or "RTK"), by and through its undersigned counsel, as and for its amended complaint against defendant, Jack Shapiro ("Defendant" or "Shapiro"), alleges as follows:

NATURE OF THE SUIT

1. This is an action for trademark infringement, commercial defamation and unfair competition under the United States Trademark ("Lanham") Act, as amended, and breach of a dealership agreement, unfair competition, defamation, and tortious interference with existing and prospective contract in violation of New York common law.

2. Although Plaintiff terminated its dealership arrangement with Defendant and Defendant acknowledges that he is a *former* dealer, Defendant continues to utilize Plaintiff's trademarks and sell Plaintiff's goods.

3. Plaintiff seeks to protect its REVO mark and variations thereof, which it has used for over the past decade in the United States in connection with the manufacturing, distribution and sale of its automotive software products.

4. Defendant has trespassed blatantly on Plaintiff's trademark rights by marketing and offering for sale similar goods and services under a designation identical to Plaintiff's marks.

VW FOIA, EPA 06/20/2017 2017-FFP_024136

5. Despite Plaintiff's demands that Defendant cease infringing on its trademark rights and selling Plaintiff's goods, Defendant has continued to use and appropriate Plaintiff's marks and sell Plaintiff's goods.

6. In addition, after Plaintiff commenced this action, Defendant hasengaged in a campaign to defame Plaintiff in the market place by publishing false and misleading statements regarding Plaintiff and its product on his website and eBay. Defendant's misleading statements include that (i) Plaintiff is perpetrating a fraud on government agencies by tampering with emission devices; (ii) Plaintiff's intellectual property is "illegal;" (iii) Plaintiff commits acts of forgery; and (iv) Plaintiff defrauds customers and its dealer network. Upon information and belief, Defendant has also emailed to Plaintiff's dealer network these false statements and solicited them to provide him with Plaintiff's proprietary information, which would constitute a breach of their dealership agreements.

7. Plaintiff brings this action to put an end to Defendant's willful violation of its rights.

THE PARTIES

8. Plaintiff is a limited liability company organized under the laws of the United Kingdom, having a principal place of business of 37 Lanchester Way, Royal Oak Industrial Estate, Daventry, NN118PH, United Kingdom.

9. Upon information and belief, defendant Jack Shapiro is an individual residing in New York at 1001 State Route 17K, Montgomery, New York 12549. Mr. Shapiro also does business under the name European Parts Emporium.

VW FOIA, EPA 06/20/2017 2017-FFP_024137

JURISDICTION AND VENUE

10. This Court has jurisdiction over this dispute pursuant to 15 U.S.C. § 1121, 28 U.S.C. § 1331 and 28 U.S.C. § 1338(a), as the counts pleaded herein arise under the United States Trademark (Lanham) Act of 1946, as amended, 15 U.S.C. §§ 1051-1127.

11. Subject matter jurisdiction in this Court over these causes of action is proper pursuant to Sections 39 and 44 of the Lanham Act, 15 U.S.C. § 1121 and 28 U.S.C. §§ 1331 and 1338, and pursuant to 28 U.S.C. § 1367, under a theory of supplemental jurisdiction.

12. This Court has personal jurisdiction over the Defendant as Defendant resides and conducts business in this district, and as Defendant has caused injury to Plaintiff in this judicial district.

13. Venue is proper in the Southern District of New York pursuant to 28 U.S.C. § 1391(b), as a substantial part of the events giving rise to the claims of this complaint occurred in this judicial district.

STATEMENT OF FACTS

PLAINTIFF'S TRADEMARK RIGHTS

14. Plaintiff RTK was founded in 2002 in Daventry, England. The company offers automotive aftermarket performance-enhancing products and services.

15. For over 10 years, since 2003, Plaintiff has manufactured, distributed, offered for sale, and sold its automotive software products under the REVO TECHNIK mark in the United States.

16. Since that time, Plaintiff has also manufactured, distributed, offered for sale, and sold its automotive software products under the REVO mark in the United States.

17. Plaintiff offers its goods and services in over forty (40) countries around the world, through a network of over 400 authorized dealers and performance centers internationally.

VW FOIA, EPA 06/20/2017 2017-FFP_024138

18. In the United States specifically, Plaintiff's products are sold nationwide, through a network of dealers located in approximately 30 states.

19. Plaintiff owns the following U.S. trademark registration:

- Reg. No. 4,759,978 for the mark REVO, in Class 42 for computer software used to increase automotive fuel efficiency and engine performance.

20. Plaintiff also owns the following pending U.S. trademark applications:

- Serial No. 86/442,535 for the mark REVO TECHNIK, in Class 42 for computer software used to increase automotive fuel efficiency and engine performance.

Collectively, Plaintiff's trademarks are referred to as the "REVO Marks." A copy of the certificate of registration for the registered REVO Mark is attached hereto as **Exhibit A**.

21. In the past five years alone, Plaintiff has realized not less than 2 million dollars in sales for goods and services offered under the marks in the United States.

22. Indeed, Plaintiff is one of the leading providers of such goods and services in the United States.

23. Additionally, Plaintiff has spent significant sums of money to promote, advertise and market its REVO brand in the United States. Excerpts of Plaintiff's website, through which Plaintiff markets its goods in the United States, are attached hereto as **Exhibit B.**

24. The REVO Marks have become well-known to consumers throughout the United States as an indication of goods and services emanating from or authorized by a single source, namely Plaintiff, and thus have acquired distinctiveness and secondary meaning.

25. As a result of Plaintiff's sales of goods and services under the REVO designations, its extensive promotion of the REVO Marks, and its nationwide presence, the REVO Marks have become imbued with goodwill and renown, which is exclusively associated with Plaintiff.

VW FOIA, EPA 06/20/2017 2017-FFP_024139

DEFENDANT'S INFRINGEMENT OF PLAINTIFF'S TRADEMARK RIGHTS

26. Defendant has engaged in activities designed to trade off the reputation and goodwill earned by Plaintiff in its REVO Marks.

27. As noted, Plaintiff's products and services are distributed through a network of dealers and performance centers.

28. Defendant is a former dealer of Plaintiff.

29. On or about April 7, 2003, Defendant signed an agreement with Revo Technik America, LLC (the "Dealer Agreement"). A true and complete copy of the Dealer Agreement, dated April 7, 2003, is attached hereto as **Exhibit C**.

30. In his capacity as a dealer for Plaintiff, Defendant sold Plaintiff's software and related products to consumers, including installing and providing support for Plaintiff's software products sold under the REVO Marks on consumer's vehicles.

31. Under the terms of the parties' agreement, any and all intellectual property rights, including rights in the REVO Marks, remain the property of Plaintiff.

32. Specifically, Paragraph 2.2 of the Dealer Agreement set forth the following:

> **Ownership of Intellectual Property Rights**.
>
> All patents, trademarks, trade names, Trade Secrets, know-how, logos, derivatives, copyrights, copyrightable material, Software System, hardware, instruction manuals, code, chips and other designations used or adopted by REVO in connection with the manufacturing, selling or distribution of the REVO Software including, without limitation, the REVO marks and original content (collectively the "Rights") shall at all times be and remain the exclusive property of REVO. Nothing contained in this Agreement shall be construed to give New Company any ownership of or interest in the Rights or shall enable New Company to use the Rights after the expiration or termination of this Agreement. Any and all trademarks, copyrights, or other Rights which may exist or hereafter come into being, including without limitation, brand names subbrand names, or slogans, and which are used on labeling, packaging, advertising or promotional material for REVO Software shall be the exclusive property of REVO and shall be deemed included among the Rights. To the extent any other rights in or to any

VW FOIA, EPA 06/20/2017 2017-FFP_024140

> trademarks, copyrights or other intellectual property associated or related to REVO Software or the marketing, sale or distribution thereof are deemed to accrue to New Company, New Company hereby agrees to assign any and all such rights to REVO at such time as they are deemed to accrue.

See Exhibit B at ¶ 2.2.

33. Under the terms of the Dealer Agreement, Defendant also acknowledged that the REVO Marks belong to Plaintiff, as pursuant to Paragraph 3.2 of the Dealer Agreement, the parties agreed as follows:

> **Rights to the Marks**
>
> Nothing in this Agreement will create in New Company any rights in the REVO Marks (except the right to use such marks in accordance with this Agreement). New Company shall not use the REVO name or any abbreviation, contraction or simulation thereof or of REVO affiliated companies without REVO's prior written consent other than as expressly provided for in this Agreement.

See Id. at ¶ 3.2.

34. In addition, Defendant further agreed that it "shall not file during the Term [of the Dealer Agreement] or thereafter, any application for trademark or service mark registration or otherwise obtain or attempt to obtain ownership of any trademark, service mark or trade name with consist of a REVO mark or any REVO mark design, logo or slogan." Id. at ¶ 2.3.

35. Further, the Dealer Agreement provided that upon termination of the dealership arrangement, the dealer and his New Company shall discontinue use of the REVO Marks and any other REVO trade names or trademarks. Id. at ¶ 4.3.

36. Moreover, upon termination, the dealer must return all unused goods and materials, REVO's proprietary Serial Port Programming cable (the "SPP Cable"), service manuals, and other REVO materials to Plaintiff. Id.

37. The Dealer Agreement was renewed on or about November 23, 2005 by and between Shapiro and Revo Developments, Limited, the successor to Revo Technik America,

VW FOIA, EPA 06/20/2017 2017-FFP_024141

LLC (the "Renewal Agreement" and together with the Dealer Agreement, "Agreements"). A true and complete copy of the signature page of the Renewal Agreement, executed by Defendant on or about November 23, 2005, is attached hereto as **Exhibit D**. Plaintiff has succeeded to Revo Developments, Limited's rights in the Agreements.

38. The term of the Renewal Agreement was for one year and automatically renewed for one year terms unless otherwise terminated.

39. The terms of the Renewal Agreement carried forward Defendant's acknowledgment of Plaintiff's rights in its REVO Marks.

40. In addition, it also set forth that upon termination of the dealership arrangement, the dealer must return all unused goods, the SPP Cable, and other materials within 5 days of termination.

41. On or about December 4, 2013, Plaintiff terminated the dealership agreement with Defendant.

42. At the time it terminated the Agreements, Plaintiff demanded that Defendant return the SPP Cable and other materials as provided for under the Agreements. Defendant failed to comply with such demand.

43. Despite having been terminated as a dealer of Plaintiff, Defendant also continued to advertise and promote himself as "an authorized Revo Technik Dealer."

44. In addition, though he no longer has Plaintiff's permission to do so, Defendant continues to advertise and display Plaintiff's REVO Marks and Plaintiff's products and services on his website, www.europeanpartsemporium.com.

45. Further, notwithstanding his knowledge of Plaintiff's rights in the REVO Marks, on January 21, 2014, Defendant filed an application with the U.S. Trademark Office to register

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the trademark REVO TECHNIK USA (the "Infringing Mark"), U.S. Trademark Application Serial No. 86/170,954 for "[d]ocument data transfer from one computer format to another; document data transfer from one computer to another; computer services, namely, data recovery services; computer services, namely, providing encrypted data recovery services" in Class 42 (the "Application"). A true and complete copy of Defendant's Application for the Infringing Mark, filed January 21, 2014, is attached hereto as **Exhibit E**.

46. Though Defendant described the relevant goods and services using differing terminology in the Application, upon information and belief, such goods and services clearly refer to goods and services identical to, related to, or highly similar to those offered by Plaintiff, and therefore the Application sought to register a mark that is identical to or highly related to Plaintiff's REVO Marks.

47. Prompted by the discovery of Defendant's Application for the Infringing Mark, and in view of Plaintiff's prior rights, in July 2014, counsel for Plaintiff demanded that Defendant withdraw the Application for the Infringing Mark. In addition, Plaintiff demanded that Defendant cease from displaying the REVO Marks and otherwise associating himself with Plaintiff on his website. A true and complete copy of Plaintiff's July 28, 2014 correspondence is attached hereto as **Exhibit F**.

48. Plaintiff also reiterated its demands that Shapiro return the SPP Cable and any unused goods and materials to Plaintiff. *See id.*

49. In response to Plaintiff's July 28th correspondence, Shapiro asserted that he had returned the SPP Cable (without which he is unable to sell Plaintiff's goods or continue to act as a dealer) to Plaintiff on or about October 19, 2012. However, the cable returned by Defendant was an old version of the cable. Subsequent to the return of such cable, on or about October 22,

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2012, Plaintiff issued Defendant a new SPP cable, which upon information and belief Defendant has not returned.

50. Upon information and belief, Defendant is still in possession of the SPP cable that was issued on or about October 22, 2012 given that Defendant continues to sell Plaintiff's goods, which, upon information and belief, he cannot sell without use of the SPP Cable as the cable is necessary to service and install Plaintiff's software. Thus, Defendant's continued selling of Plaintiff's goods belies his assertion that he has returned all of Plaintiff's SPP cables.

51. Despite further correspondence from Plaintiff demanding that Shapiro cease his infringing acts, Shapiro failed to comply with any of Plaintiff's demands, including the demand to withdraw the Application to register the Infringing Mark.

52. On November 3, 2014, Plaintiff filed its own applications to register the REVO Marks and was forced to file a Notice of Opposition with the U.S. Trademark Office, Trademark Trial and Appeal Board ("TTAB"), opposing Defendant's Application for the Infringing Mark. A true and complete copy of the Notice of Opposition, filed on November 4, 2014 with the TTAB, is attached hereto as **Exhibit G**.

53. Shapiro failed to file an answer or otherwise respond to Plaintiff's Notice of Opposition within his time to do so.

54. Accordingly, on January 16, 2015, the TTAB issued an Order to Show Cause and Notice of Default, providing Shapiro thirty (30) days from the date of the notice to show why a judgment of default should not be entered against him. A true and complete copy of the Order to Show Cause, dated January 16, 2015, is attached hereto as **Exhibit H**.

55. Following Shapiro's default and the issuance of the Board's Order to Show Cause, by way of a correspondence dated January 19, 2015, Plaintiff reiterated its demands that

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[illegible] activities. A true and complete copy of Plaintiff's January 19, 2015 correspondence is attached hereto as **Exhibit I**.

56. In or around January 28, 2015, Shapiro acknowledged that Plaintiff terminated the dealership agreement. He removed references to himself as "an authorized Revo Technik Dealer," from his website and clarified that he is a former dealer for Plaintiff. Despite his acknowledgment that he is a former dealer of Plaintiff, Shapiro did not cease utilizing the REVO Marks or selling Plaintiff's goods. Indeed, on his website, Defendant states that he will continue to sell new versions of Plaintiff's goods despite being terminated as a dealer for Plaintiff. Excerpts of Defendant's website, www.europeanpartsemporium.com, wherein he wrongfully continues to advertise and display the REVO Marks are attached hereto as **Exhibit J**.

57. On February 28, 2015, judgment was entered by the TTAB on Defendant's Application against Defendant and in favor of Plaintiff. A true and complete copy of the TTAB's February 28, 2015 Judgment is attached hereto as **Exhibit K**.

58. Shapiro however continues to sell and promote REVO branded products and advertise and display Plaintiff's REVO Marks on his website.

59. Shapiro also has refused to return the SPP Cable and any unused REVO goods or materials.

60. Further, Shapiro is continuing to sell and promote REVO branded products on an eBay store under the name "vwemporium128a." True copies of images from Shapiro's eBay store, where he sells and features REVO branded products and continues to advertise and display the REVO Marks, are attached hereto as **Exhibit L**.

61. Moreover, to promote his company, European Parts Emporium, Shapiro continues to use paraphernalia and marketing materials that bear the REVO Marks, including but not

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continues to display the REVO Marks on his business cards, as well as continues to distribute promotional materials that associate his business with that of the Plaintiff.

62. In addition, despite being denied registration for the Infringing Mark, Revo Technik USA and despite Plaintiff's clear prior rights in the REVO Marks, Defendant continues to use the Infringing Mark.

63. Defendant has purchased and owns the domain name www.revotechnikusa.com (the "Infringing Domain"), which website redirects consumers to his European Parts Emporium website. Upon information and belief, Defendant registered this domain in bad faith and with the specific intent of diverting consumers from Plaintiff's website.

64. Plaintiff also learned that Shapiro is selling and promoting REVO branded products on a second eBay store under the name "revo_technik_usa," a name confusingly similar, and indeed nearly identical to the REVO Marks. True copies of images from Shapiro's eBay store, under the member name "revo_technik_usa," which sells and features REVO branded products and advertises and display the REVO Marks, are attached hereto as **Exhibit M**.

65. Further, upon information and belief, in order to sell the types of the Plaintiff's goods available for purchase on Defendant's "revo_technik_usa" eBay store, Defendant must be in possession of Plaintiff's SPP Cable. Accordingly, upon information and belief, Defendant has retained Plaintiff's SPP Cable.

66. In addition, despite demands from Plaintiff that Defendant cease his continued use of the REVO Marks and of the Infringing Mark, REVO TECHNIK USA, Defendant has refused and persists in his infringing activities.

67. Defendant's Infringing Mark is identical, or nearly identical, to Plaintiff's REVO Marks.

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68. Given the identical nature of the Infringing Mark and the REVO Marks, Defendant's use of the Infringing Mark is likely to cause confusion in the marketplace as to the origination, association, sponsorship or endorsement of Defendant and/or its goods and services' sold under the Infringing Mark by or with Plaintiff and/or its goods and services sold under the REVO Marks.

69. Further, as a result of Defendant's role as a former dealer of Plaintiff, Defendant had constructive notice, since long prior to the commencement of Defendant's unlawful actions described herein, of Plaintiff's exclusive ownership of the REVO Marks.

70. In addition, Plaintiff no longer has an association, affiliation, sponsorship or any other connection to the Defendant. Nonetheless, Defendant continues to use the REVO Marks on his website. Consequently, Defendant's wrongful actions are likely to mislead consumers into believing that Plaintiff and Defendant are affiliated when they are not.

71. Defendant's wrongful actions are likely to divert and appropriate the goodwill created by Plaintiff in its REVO Marks.

72. Upon information and belief, Defendant is willfully and in bad faith attempting to exploit the goodwill and fame of the REVO Marks. Defendant's infringing use of the REVO Marks on his website and eBay stores, and his use of the Infringing Mark has the effect of injuring Plaintiff by deceiving, misleading, and confusing Plaintiff's customers and the public in general as to whether Plaintiff is the source, sponsor, or otherwise associated with Defendant and the goods and services intended to be sold under the Infringing Mark.

DEFENDANT'S FALSE AND MISLEADING STATEMENTS

73. Subsequent to Plaintiff's commencement of this action, Defendant has engaged in a campaign to defame and disparage Plaintiff and its products.

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74. On or about July 16, 2015, Defendant published on his website malicious, defamatory and disparaging comments concerning Plaintiff and its products. On his website, Defendant stated that (a) Plaintiff's products are "illegal;" (b) Plaintiff defrauds government agencies by taking steps to circumvent emission testing; and (c) Plaintiff displays false statements on its website regarding its products. Specifically, Defendant's website contained the following disparaging statements: that Plaintiff engages in a "criminal enterprise for programming cars driven on public roads . . . by deceiving Federal/State Government SMOG Emission agencies, Insurance companies, deceit or even you the customer by their documented lies . . ." Defendant went on to state that Plaintiff lies to its customers and "will forge anything they choose to suit their illegal business model, stating, more lies at any given time." A true and complete copy of an excerpt of Defendant's website page containing such malicious, defamatory and disparaging comments is attached hereto as **Exhibit N**.

75. Such malicious, defamatory and disparaging comments are accessible to consumers via Defendant's website, www.europeanpartsemporium.com, as well as through the Infringing Domain, www.revotechnikusa.com, which domain incorporates terms confusingly similar to Plaintiff's REVO Marks and which redirects to Defendant's www.europeanpartsemporium.com domain.

76. Similarly, Defendant has posted nearly identical malicious, defamatory and disparaging statements on the eBay website wherein he sells Plaintiff's products. A true and complete copy of an excerpt of Defendant's eBay store is attached hereto as **Exhibit O**. In addition to publishing such false statements on the eBay website, Defendant also solicits "REVO TECHNIK DEALERS" to breach their own dealership agreements with Plaintiff. He requests that the dealers provide him with Plaintiff's proprietary information, including credits for SPP

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cables (which cables are required to purchase and sell Plaintiff's software products), Plaintiff's internal documents and encrypted files.

77. In addition, on July 15, 2015, Defendant sent an email to Plaintiff's dealers directly soliciting them to turn over Plaintiff's proprietary information. The email also contained a link to Defendant's website which contained the malicious, defamatory and disparaging statements referenced above. In such email, Defendant also asked Plaintiff's dealers, the following question: "Ever suspect that a sale was undermined and sent directly to Revo circumventing you?" Upon information and belief, this question was posed to cause dealers to believe that Plaintiff is deflecting customer sales from its dealer network and retaining the sales for itself. Defendant went on to state to Plaintiff's dealers that Plaintiff is "bilking" them. Upon information and belief, the July 15, 2015 email went to REVO's entire dealer network as well as other third parties in the automobile industry.

78. Upon information and belief, Defendant has also posted disparaging comments concerning Plaintiff, consistent with the above-referenced statements, on various online automobile forums. Upon information and belief, on or about August 5, 2015, Defendant initiated a discussion thread on the forum VWVortex.com, under the username "OVER_Technik_USA" and falsely stated that Plaintiff was under investigation by the Environmental Protection Agency. A true and complete copy of this thread from the website VWVortex.com is attached hereto as **Exhibit P.**

79. Defendant's statements concerning Plaintiff, its products, and its business are false.

80. With respect to Defendant's statement that Plaintiff is defrauding government agencies by modifying its product to circumvent emission tests, Defendant has full knowledge

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that this is false statement. Being in the industry, Defendant is fully aware that if Plaintiff tampered with the product to circumvent emissions tests, *any* modification would cause the vehicle to actually fail the test.

81. Nonetheless, Defendant knowingly published these false and misleading commercial statements in order to create the false and misleading impression that Plaintiff is engaging in illegal activity and defrauding its dealer network.

82. Indeed, Defendant's knowledge that these statements are false is betrayed by the fact that, notwithstanding his disparaging allegations concerning Plaintiff and its products, he continues to advertise, market, and sell REVO branded products.

83. Further, in making the aforementioned statements, the Defendant's malice and intent to harm Plaintiff's business reputation is demonstrated by the fact that he has also adopted the designation, as seen on both his website and eBay stores, "OVER Technik" – which is merely REVO spelled backwards. On the eBay website, he further mocks Plaintiff and states "Welcome to the World of OVER Technik!" That Defendant's conduct is malicious and directed to harm Plaintiff, a UK company, is further evidenced by the final sentence on his website – "As they say in the UK . . . . . Cheers a[**]hole!" See Exhibit N.

84. As a result of Defendant's false, malicious, defamatory, and disparaging statements about Plaintiff on his website, the eBay website, and via email to Plaintiff's dealers, Defendant has caused substantial injury to Plaintiff's business reputation and goodwill.

COUNT I
VIOLATIONS OF THE U.S. LANHAM ACT
(Trademark Infringement, False Designation of Origin and Unfair Competition Under 15 U.S.C. §§ 1114(1), 1125(a))

85. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

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86. Plaintiff has long standing rights in the REVO Marks, which marks are inherently distinctive to the public.

87. Plaintiff owns a U.S. Trademark Registration for the REVO Marks.

88. The REVO Marks have become well-known to consumers throughout the United States as an indication of goods and services emanating from or authorized by a single source, namely Plaintiff, and thus have acquired distinctiveness and secondary meaning.

89. Defendant's distribution, advertisement, offering for sale, and sale of goods and services under the Infringing Mark is likely to cause confusion, to cause mistake, or to deceive in violation of Section 32(1) of the Lanham Act, 15 U.S.C. § 1114(1), and Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

90. In addition, Defendant's use and promotion of Plaintiff's REVO Marks in commerce constitutes infringement of Plaintiff's REVO Marks in violation of Section 32(1) of the Lanham Act, 15 U.S.C. § 1114(1), and Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

91. Defendant's wrongful conduct also creates a false designation of origin and a false representation of Plaintiff's goods and services in violation of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a). Defendant's acts intend to suggest and has falsely suggested that Defendant's goods and services are endorsed, sponsored, authorized, or approved by Plaintiff in a manner to mislead consumers.

92. Defendant's acts described herein infringe Plaintiff's Marks, injure Plaintiff's business, reputation, and goodwill, and unless restrained and enjoined, will continue to do so, causing Plaintiff irreparable harm.

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93. Defendant's acts of trademark infringement have irreparably harmed and, if not enjoined, will continue to irreparably harm the general public, who has an interest in being free from confusion, mistake, and deception.

94. By reason of Defendant's acts of trademark infringement, Plaintiff's remedy at law is not adequate to compensate it for the injuries inflicted by Defendants. Accordingly, Plaintiff is entitled to injunctive relief pursuant to 15 U.S.C. § 1116.

95. Defendant's acts of trademark infringement are willful and Plaintiff is entitled to damages, and that those damages be trebled under 15 U.S.C. § 1117.

96. The foregoing acts of infringement have been and continue to be deliberate, willful and wanton, making this an exceptional case within the meaning of 15 U.S.C. § 1117 and entitling Plaintiff to an award of attorney's fees.

COUNT II
VIOLATIONS OF THE U.S. LANHAM ACT
(False Advertising, Commercial Defamation and Unfair Competition Under 15 U.S.C. § 1125(a))

97. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

98. Defendant's conduct, described herein, constitutes false advertising, product disparagement and unfair competition in violation of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

99. Defendant's commercial statements, made through and in the context of interstate commerce, to customers and dealers that Plaintiff is perpetrating a fraud against government agencies by circumventing emission devices; utilizing "illegal" intellectual property; committing acts of forgery; and defrauding its customers and dealer network; are all false statements. In addition, Defendant's statement that Plaintiff is "bilking" its dealers creates the false and

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misleading impression that Plaintiff is undermining its dealer network and is seeking to divert customers away from them.

100. Defendant's false and misleading statements, described above, have misled and have the tendency to mislead and deceive Plaintiff's dealers and customers concerning Plaintiff and its products.

101. Defendant's false and misleading statements are material because they are likely to affect consumers' decisions to purchase Plaintiff's product as well as dealers' decisions to conduct business with Plaintiff.

102. Defendant's false and misleading statements are willful and reckless because Defendant knew or should have known that the statements made were false, and they were intended to deceive, mislead and confuse the parties reading the statements about the manner in which Plaintiff operates its business and the nature of Plaintiff's products.

103. Plaintiff has suffered irreparably injury to its goodwill and reputation as a direct and proximate result of Defendant's false and misleading statements and violations of the Lanham Act.

104. Each of Defendant's separate violations of the Lanham Act, as alleged herein, in combination with one or more of the other violations, also constitutes, in combination, separate aggregate violations of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

105. Defendant's conduct in this respect is continuing and will continue unless restrained by the Court. Unless Defendant is enjoined from engaging in its wrongful conduct, Plaintiff will continue to suffer irreparable injury and harm.

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misleading impression that Plaintiff is undermining its dealer network and is seeking to divert customers away from them.

100. Defendant's false and misleading statements, described above, have misled and have the tendency to mislead and deceive Plaintiff's dealers and customers concerning Plaintiff and its products.

101. Defendant's false and misleading statements are material because they are likely to affect consumers' decisions to purchase Plaintiff's product as well as dealers' decisions to conduct business with Plaintiff.

102. Defendant's false and misleading statements are willful and reckless because Defendant knew or should have known that the statements made were false, and they were intended to deceive, mislead and confuse the parties reading the statements about the manner in which Plaintiff operates its business and the nature of Plaintiff's products.

103. Plaintiff has suffered irreparably injury to its goodwill and reputation as a direct and proximate result of Defendant's false and misleading statements and violations of the Lanham Act.

104. Each of Defendant's separate violations of the Lanham Act, as alleged herein, in combination with one or more of the other violations, also constitutes, in combination, separate aggregate violations of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

105. Defendant's conduct in this respect is continuing and will continue unless restrained by the Court. Unless Defendant is enjoined from engaging in its wrongful conduct, Plaintiff will continue to suffer irreparable injury and harm.

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COUNT III
VIOLATION OF THE ANTICYBERSQUATTING CONSUMER PROTECTION ACT
(15 U.S.C. § 1125(d))

106. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

107. Upon information and belief, Defendant is the owner of the Infringing Domain, www.revotechnikusa.com.

108. Defendant registered and used the Infringing Domain in bad faith and with the specific intent of diverting consumers from Plaintiff's website, unlawfully profiting from use of Plaintiff's REVO Marks, causing harm to Plaintiff and its brand, and creating a likelihood of confusion as to source, sponsorship, affiliation, or endorsement of Defendant by Plaintiff.

109. Defendant actions constitute a violation of the Anticybersquatting Consumer Protection Act, 15 U.S.C. § 1125(d) (the "ACPA").

110. Defendant's unauthorized registration and use of the Infringing Domain have caused and unless enjoined, will continue to cause, irreparable injury to Plaintiff and to the goodwill associated with the REVO Marks.

111. As Defendant's actions constitute a violation of the ACPA, Plaintiff is entitled to an order from this Court directing the Registrar of said domain to transfer the ownership of the Infringing Domain to Plaintiff and an award of damages to be determined at trial as well as attorneys' fees, costs and disbursements.

COUNT IV
COMMON LAW TRADEMARK INFRINGEMENT
(N.Y. Gen. Bus. Law § 360)

112. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

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113. Plaintiff is the owner of the common law rights in the REVO Marks, including in the mark REVO TECHNIK. Plaintiff's REVO Marks are well known, distinctive and recognized as denoting high-quality goods and services to the purchasing public throughout the United States.

114. Due to such reputation and public awareness, Plaintiff has established valuable good will in connection with REVO Marks.

115. Defendant's unauthorized adoption and use of the Infringing Mark, which is identical or nearly identical to Plaintiff's REVO Marks, and Defendant's wrongful use and appropriation of Plaintiff's REVO Marks in New York is likely to cause confusion or mistake and has and will deceive the public into associating Defendant's goods and services with those of Plaintiff.

116. These acts constitute common law service mark infringement for which Plaintiff has no adequate remedy at law.

117. Upon information and belief, Defendant committed the above alleged acts willfully, in bad faith, and in conscious disregard of Plaintiff's rights, and Plaintiff is therefore entitled to exemplary and punitive damages pursuant to the common law of the State of New York in an amount sufficient to punish, deter and make an example of Defendants.

118. By the acts described above, Defendants have engaged in trademark infringement in violation of the common law of the State of New York.

119. Defendant's acts have caused, and will continue to cause, irreparable injury to Plaintiff for which Plaintiff has no adequate remedy at law.

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COUNT V
DEFAMATION IN VIOLATION OF NEW YORK COMMON LAW

120. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

121. Defendant published false and defamatory statements about Plaintiff, its products, and business practices on his website, on the eBay website and through emails to dealers within Plaintiff's dealer network.

122. Through such statements, Defendant falsely asserts, *inter alia*, that Plaintiff engages in conduct to defraud government agencies by circumventing emissions devices; Plaintiff defrauds its customers and dealers; Plaintiff commits forgery and Plaintiff diverts customers from its dealer network.

123. Defendant knew the statements concerning Plaintiff were false and defamatory when he published it to others, or Defendant published such statements with reckless or wanton disregard as to whether such statements are true or false.

124. Defendant's statements are defamatory *per se* as they impute fraud and misconduct to Plaintiff thereby causing significant harm to Plaintiff's trade and business reputation, diminishing Plaintiff's goodwill, and subjecting Plaintiff to contempt, ridicule, aversion, ostracism, degradation or disgrace.

125. As a result of Defendant's conduct, Plaintiff has been greatly injured and damaged in an amount to be determined at trial.

126. Defendant's conduct is continuing and will continue unless restrained by the Court. Unless Defendant is enjoined from engaging in wrongful conduct, Defendant will continue to suffer irreparable injury and harm.

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COUNT VI
UNFAIR COMPETITION IN VIOLATION OF NEW YORK COMMON LAW
(N.Y. Gen. Bus. Law § 349(a))

127. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

128. The adoption and use by Defendant in New York of the Infringing Mark, and unauthorized use and display of Plaintiff's REVO Marks constitutes unlawful appropriation of Plaintiff's exclusive rights in and to its REVO Marks.

129. Through such acts, Defendant improperly trades upon Plantiff's goodwill and valuable rights in and to the REVO Marks.

130. In addition, Defendant's false and misleading statements and other wrongful conduct, described herein, constitute unfair competition in violation of New York common law.

131. Defendant's false and misleading statements have misled and have the tendency to mislead Plaintiff's customers and dealer network.

132. Defendant's false and misleading statements, described herein, constitute willful and deliberate efforts to cause (i) customers to refrain from purchasing Plaintiff's product; or (ii) Plaintiff's dealers to refrain from continuing to do business with Plaintiff.

133. Defendant's unauthorized use of the REVO Marks and misleading statements have caused and is causing damage and irreparable injury to Plaintiff.

134. The foregoing acts by Defendant constitute unfair competition and infringement of Plaintiffs common law rights for which Plaintiff has no adequate remedy at law.

COUNT VII
BREACH OF CONTRACT

135. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

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136. Plaintiff succeeded to Revo Developments, Limited's rights under the Agreements.

137. Under the terms of the Agreements, Defendant acknowledged Plaintiff's rights in and ownership of the REVO Marks.

138. Further, the terms of the Agreements set forth that upon termination of the dealership relationship, Defendant was to return or make available for return Plaintiff's proprietary SPP Cable as well as unused REVO materials or goods.

139. Upon termination of the agreement, Plaintiff demanded that Defendant return the SPP Cable and the unused materials.

140. Defendant, however, failed and has refused to comply with such demand

141. Moreover, despite acknowledging Plaintiff's rights in the REVO Marks, and though he is no longer authorized to do so, Defendant continues to use the Infringing Mark and continues to sell and promote REVO branded products and advertise and display Plaintiff's REVO Marks on his website and on his eBay stores.

142. As a result of Defendant's material breaches of the Agreements, Plaintiff has suffered damages in an amount to be determined at trial.

COUNT VIII
TORTIOUS INTERFERENCE WITH CONTRACT IN VIOLATION OF NEW YORK COMMON LAW

143. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

144. Defendant's statements, described herein, are knowingly false and defamatory statements about Plaintiff, Plaintiff's business and its products.

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145. Defendant's knowingly false, misleading and disparaging statements are causing its dealers to believe that Plaintiff is engaged in a scheme to defraud government agencies and/or that Plaintiff is currently subject to a government investigation and/or that Plaintiff defrauds its dealer network.

146. Defendant statements are made with the unjustifiable intention of harming Plaintiff and its relationship with its existing dealers and to cause injury to Plaintiff's goodwill, reputation and business.

147. Defendant has also solicited Plaintiff's dealers to breach their dealership agreements with Plaintiff by providing Defendant with proprietary information and equipment belonging to Plaintiff.

148. Defendant is well aware that Plaintiff operates through a network of dealers in the United States and that such dealers have entered into valid and subsisting dealer agreements with Plaintiff.

149. Defendant has intentionally and unjustifiably interfered with the business relationships between Plaintiff and its dealers by making knowingly false and misleading statements regarding Plaintiff and its product to induce Plaintiff's dealers to breach their dealer agreement with Plaintiff, including but not limited to, by providing Defendant with proprietary materials belonging to Plaintiff.

150. Defendant has and continues to cause Plaintiff damage, including irreparable injury to Plaintiff's business relationships with its dealers, as well as Plaintiff's good will and reputation.

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COUNT IX
TORTIOUS INTERFERENCE WITH PROSPECTIVE ECONOMIC ADVANTAGE IN VIOLATION OF NEW YORK COMMON LAW

151. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

152. Defendant's statements, described herein, are knowingly false and defamatory statements about Plaintiff, Plaintiff's business and its products.

153. Defendant has intentionally and maliciously made such false statements to cause injury to Plaintiff and to Plaintiff's goodwill, reputation and business.

154. Defendant's knowingly false, misleading and disparaging statements are causing dealers and/or customers to believe that Plaintiff is engaged in a scheme to defraud government agencies and/or that Plaintiff is currently subject to a government investigation and/or that Plaintiff defrauds its dealer network.

155. Defendant is well aware that Plaintiff operates through a network of dealers in the United States and Plaintiff intends to further develop this network with other dealers in the automotive industry as well as obtain new customers.

156. Defendant has intentionally and unjustifiably interfered with the business relationships between Plaintiff and those parties by making knowingly false and misleading statements regarding Plaintiff and its product.

157. Defendant has and continues to cause Plaintiff damage, including irreparable injury to Plaintiff's business relationships with its dealers and customers, as well as Plaintiff's good will and reputation.

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PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court:

A. Enter judgment in favor of Plaintiff and against Defendant on Plaintiff's causes of action stated herein;

B. Grant Plaintiff a permanent injunction enjoining Defendant and its officers, agents, servants, employees, attorneys and all other persons in active concert or participation with any of them, from:

1. Directly or indirectly infringing Plaintiff's trademarks in any manner, including but not limited to the provision, advertising, selling, or offering for sale any services that infringe Plaintiff's trademarks or trade dress; and
2. Using the REVO Marks or any reproduction, counterfeit, copy, or colorable imitation of such mark in connection with the provision, advertising, marketing, sale, offering for sale, or other use of any good or service, including on any website owned or controlled by Defendant, including but not limited to the website, www.europeanpartsemporium.com; and
3. Using any word, term, name, symbol, or device, or any combination thereof, or using any false designation of origin, false, or misleading description of fact, or false or misleading representation of fact, which is likely to cause confusion, or to cause mistake or to deceive as to the affiliation, connection, or association of Defendant with Plaintiff or as to the origin, sponsorship, or approval of a Defendant's services by Plaintiff;
4. Engaging in any other activity constituting unfair competition with Plaintiff or constituting an infringement of the REVO Marks;

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5. Making any false, misleading, slanderous, defamatory, or disparaging statements or engaging in false, misleading or unfair trade practices or tortious interference with business relationships, including, without limitation, stating, claiming, suggesting, intimating or implying in any manner whatsoever that Plaintiff is seeking to defraud federal and government agencies by tampering with smog detectors, that Plaintiff has made fraudulent statements to its dealers and/or customers, committed forgery or diverted customers from its dealer network;

6. Making any other false, misleading, slanderous, disparaging or defamatory statements about Plaintiff or Plaintiff's products; and

7. Otherwise engaging in acts, either directly or through other entities, of product disparagement, slander, unfair and deceptive trade practices, unfair competition, or tortious interference with actual or prospective business relations.

B. Enter an order requiring Defendant to immediately place a corrective statement in a form, frequency, manner and publications that are acceptable to Plaintiff and the Court that expressly notifies the public that Plaintiff's does not defraud government agencies, its customers or dealers.

C. Enter an order compelling Defendant to return Plaintiff's proprietary materials, including the SPP Cable;

D. Enter an award directing the Registrar of the Infringing Domain to transfer the ownership of the Infringing Domain to Plaintiff;

E. Enter an award permanently enjoining Defendant, anyone active in concert with or in participation therewith, from registering any domain name with consists of any slogan, name, or mark confusingly similar to the REVO Marks;

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F. Enter judgment awarding Plaintiff compensatory damages, including lost profits;

G. Order an accounting of Defendant's profits realized in connection with the sale of any infringing products or on account of any false association with Plaintiff and false advertising, and an award in such amount to Plaintiff;

H. Grant an award to Plaintiff of exemplary damages;

I. Order recovery of compensatory punitive damages for Defendant's willful and malicious actions;

J. Grant of an award of attorneys' fees under the Lanham Act, 15 U.S.C. § 1117; and

K. Such other and further relief as the Court may deem just and necessary.

JURY DEMAND

Pursuant to Fed. R. Civ. P. 38(b), plaintiff hereby demands a trial by jury on all issues so triable herein.

Dated: August 13, 2015

Respectfully submitted,

/s/ *Melissa A. Pena*

Melissa A. Peña, Esq.
Ami Bhatt, Esq.
NORRIS McLAUGHLIN & MARCUS, P.A
875 Third Avenue, 8th Floor
New York, New York 10022
Phone: 212-808-0700

Attorneys for Plaintiff,
RTK Technologies Limited

VW FOIA, EPA 06/20/2017 2017-FFP_024164

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7 (EEO)
Sent: Fri 9/18/2015 8:09:31 PM
Subject: Press Information

Hello Byron,

If you do revise or try to clarify any messages to the public can you also forward to me?

Thanks,

Ex. 7

To: Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Wilson, Shari[Wilson.Shari@epa.gov]; Starfield, Lawrence[Starfield.Lawrence@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]; Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]
Cc: Conger, Nick[Conger.Nick@epa.gov]
From: Senn, John
Sent: Fri 9/18/2015 8:10:43 PM
Subject: Additional VW news clips

Here's a second batch of stories from major news outlets on today's announcement. The term "Volkswagen" was also trending on Twitter this afternoon as a result of our announcement, meaning it was one of the most discussed topics on Twitter in the United States during that time.

-

Washington Post:

http://www.washingtonpost.com/news/energy-environment/wp/2015/09/18/epa-volkswagen-used-defeat-device-to-circumvent-air-pollution-controls/

EPA: Volkswagen used 'defeat device' to circumvent air pollution controls

By Joby Warrick September 18 at 1:04 PM

The Environmental Protection Agency on Friday accused Volkswagen of installing a software "defeat device" that circumvented pollution controls on nearly a half-million Volkswagens and Audis.

The regulatory agency filed a notice of violation against the German automaker, saying the company deliberately cheated on clean-air rules by installing the software of five of its models since 2008. An EPA statement warned of possible civil penalties and hinted of a future possible recall, saying it was "incumbent on Volkswagen to initiate the process" to fix the affected cars' emissions systems.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the EPA's assistant administrator for EPA's Office of Enforcement and Compliance Assurance.

EPA officials, in a joint probe with California's regulatory agency, determined that Volkswagen had inserted a sophisticated algorithm in the cars' emissions software that could detect when a vehicle was undergoing emissions testing. The software, which the EPA called a "defeat device," would turn on full emissions controls during testing, and switch them off again under normal driving conditions.

As a result, the cars emitted far more pollution–up to 40 times the federal standard for the pollutant known as NOx, a component in urban smog, the EPA said.

The software was installed in Volkwagen's Golfs, Jettas and Beetles and Audi A3s beginning in the model year 2009, and in Volkswagen's Passat models beginning in 2014. EPA officials said no action was required by owners of the car, but they suggested that Volkswagen would be compelled to address the problem.

"Our goal now is to ensure that the affected cars are brought into compliance, said Richard Corey, the executive officer for California's Air Resources Board." He said federal and state agencies intended to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

-

Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

Agency says German auto maker circumvented air-pollution standards with software

By AMY HARDER

WASHINGTON—The U.S. Environmental Protection Agency issued a notice on Friday alleging that Volkswagen AG circumvented air-pollution standards with software installed on nearly a half million cars sold in the U.S. since 2008.

Officials said Volkswagen could face penalties of up to $37,500 per vehicle, or a total of more than $18 billion, though it remained unclear whether the government would eventually levy such a large penalty. Officials said the German auto maker violated the federal Clean Air Act.

The agency said that owners of these cars don't need to take any action right now and that while the cars have emissions exceeding federal standards, "these violations do not present a safety hazard and the cars remain legal to drive," according to the EPA.

Officials said a recall hasn't been announced and an investigation continues. They plan to at some point order Volkswagen to fix the vehicles, officials said.

Top EPA officials made the announcement alongside the California Air Resources Board, which is separately investigating the alleged use of the software, which EPA describes as a "defeat device." The software reduces the effectiveness of a car's emission control system during normal driving conditions and enables the car to emit nitrogen oxides at up to 40 times the allowable standard, according to the EPA.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance at the EPA.

"Volkswagen Group of America Inc., Volkswagen AG and Audi AG received today notice from the U.S. Environmental Protection Agency, U.S. Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen said in a statement. "VW is cooperating with the investigation; we are unable to comment further at this time."

EPA said that its allegations cover roughly 482,000 diesel passenger cars with model years between 2009 and 2015 and sold in the U.S. since 2008. They include the following models: the Jetta, Beetle, Audi A3, Golf and Passat.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the "defeat device" software, Volkswagen was violating two parts of the Clean Air Act.

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NPR:

http://www.npr.org/sections/thetwo-way/2015/09/18/441467960/volkswagen-used-defeat-device-to-skirt-emissions-rules-epa-says

Volkswagen Used 'Defeat Device' To Skirt Emissions Rules, EPA Says

BILL CHAPPELL

Saying Volkswagen violated the Clean Air Act, the Environmental Protection Agency says the company's diesel-powered cars have sophisticated software that detects emissions testing – and "turns full emissions controls on only during the test."

Installed on four-cylinder cars, the software, which the EPA calls a "defeat device" that's meant to trick official tests, allowed diesel Jettas, Beetles, and other cars to "emit up to 40 times more pollution" than allowed under U.S. emission standards.

The agency says that after the carmaker was confronted with emission test results this month, it admitted that the cars contain defeat devices.

Volkswagen must now fix the cars' emissions control systems, the agency says, adding that Volkswagen could be liable for civil penalties and other punishment. The cars in question are popular Volkswagen and Audi models that were made from 2009 to this year.

The affected diesel cars include:

• Jetta (Model Years 2009 – 2015)

• Beetle (Model Years 2009 – 2015)

• Audi A3 (Model Years 2009 – 2015)

• Golf (Model Years 2009 – 2015)

• Passat (Model Years 2014-2015)

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance.

-

Reuters:

http://www.reuters.com/article/2015/09/18/us-usa-volkswagen-idUSKCN0RI1VK20150918

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG (VOWG_p.DE) could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty

could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

-

The Hill:

http://thehill.com/policy/energy-environment/254188-epa-accuses-vw-of-going-around-federal-emissions-standards

Feds accuse VW of going around federal emissions standards

By Devin Henry - 09/18/15 12:50 PM EDT

The Environmental Protection Agency (EPA) is accusing Volkswagen of looking to circumvent federal air pollutant emission standards for the last six years.

EPA officials alleged Friday that about 482,000 VW vehicles sold since 2008 violate the Clean Air Act due to software installed on the vehicles that turns off required air pollution protections.

Janet McCabe, an acting assistant administrator, said the EPA "intends to hold VW responsible to recall the vehicles" and fix the emissions problem. The company could face up to an $18 billion fine for the violations.

The EPA issued VW a Clean Air Act violation notice Friday, alleging it used a software algorithm on certain vehicles that would turn on emission controls only when they undergo official emissions testing.

This "defeat device," the EPA said, would switch off those controls during normal operation, which means the vehicles could emit up to 40 times the amount of nitrogen oxide allowed under federal air pollution standards.

"These violations are very serious … not only because they result in excess emissions, but also because VW was concealing the fact from EPA, the state of California and from consumers," Assistant Administrator Cynthia Giles said. "We expected better from VW."

Federal law requires manufacturers to certify to the EPA that their cars meet emissions standards before selling their vehicles in the U.S. Cars with defeat devices cannot be certified, the EPA said.

A VW statement said only that the company had received the violation notice and is cooperating with the investigation.

The EPA and the California Air Resources Board discovered the defeat device during an analysis at West Virginia State University, the EPA said. Officials said their investigation into the incident is ongoing and wouldn't give many more details about how it developed or what the

outcome might be.

The agency is not ordering a recall or announcing penalties at the moment, and officials said the cars are safe and legal to drive. The Friday announcement, Giles said, was meant to "inform the public right away and to put VW on notice of our continuing investigation."

The EPA said the announcement covers VW Jettas, Beetles, Golfs and Audi A3s with model years between 2009 and 2015, as well as the VW Passat with model years 2014 and 2015.

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The Atlantic:

http://www.theatlantic.com/technology/archive/2015/09/volkswagens-game-of-make-belief/406159/

Volkswagen's Game of Make-Believe

The company inserted a device into almost 500,000 cars meant to trick emissions testing, the EPA says.

ROBINSON MEYER

One of the great lessons of the pioneering computer scientist Alan Turing is this: Computers are only pretending machines. Software is always just imitating something else.

Volkswagen seems to have taken this maxim to new heights. The Environmental Protection Agency alleges that the company installed "defeat devices" in its four-cylinder Volkswagen and Audi-brand diesel cars from 2009 to 2015.

These devices, essentially, let the cars pretend to not break the law. The software could sense when the car was undergoing emissions testing and activate its pollution-control systems accordingly. When the car was being driven during normal use, these systems largely did not activate—making the car a much heavier polluter in real-life than it looked on paper.

With those systems deactivated, the car's emissions violated the Clean Air Act and California's state pollution-control regulation.

"Using a defeat device in cars to evade clean-air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance, in a statement.

There are almost 500,000 vehicles on American roads with the devices installed, according to the EPA. Volkswagen must now pay to repair the emissions systems in affected cars. The government may also fine the company as much as $18 billion.

The device was discovered by researchers at West Virginia University, who notified the EPA and California state authorities. The two authorities investigated further, and after demanding "an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices," said a statement from the agency.

I reached out to Volkswagen for comment and haven't heard back yet. The Times reports that the company is complying with investigations.

Christian Science Monitor:

http://www.csmonitor.com/Business/In-Gear/2015/0918/Why-the-EPA-is-forcing-Volkswagen-to-recall-nearly-500-000-cars

Why the EPA is forcing Volkswagen to recall nearly 500,000 cars

Volkswagen AG, the German car manufacturer, is under investigation by California and US emissions regulators for allegedly circumventing emission tests with a new device.

By Corey Fedde, Staff SEPTEMBER 18, 2015

Volkswagen AG is under investigation for circumventing clean air rules.

German automotive company Volkswagen AG is under investigation by California and US environmental regulators. The US Environmental Protection Agency told Reuters Volkswagen allegedly used software to circumvent emissions testing of specific air pollutants.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an EPA enforcement officer, told Reuters via teleconference.

The feature, known as a "defeat device," is allegedly present in 4 cylinder Volkswagen and Audi vehicles from 2009-2015, which total nearly 500,000 vehicles. The device is programmed to detect when the car is undergoing an emissions test and turn on the full emissions controls. The device then turns the emission controls off during normal driving. The result being far more pollution than the company reported, the EPA told The New York Times.

The pollutant the "defeat device" is designed to conceal, nitrogen oxide, has been linked by public health officials to variety of health problems, including asthma.

The 500,000 diesel vehicle models affected include 2009-2015 Volkswagen Jettas, Beetles, Golfs, Passats, and Audi A3s.

The violation and investigation belie a growing trend in more aggressive environmental enforcement from federal regulators. In November 2014, the administration announced its largest ever penalty for a violation of the Clean Air Act on Korean automakers Hyundai Motor and Kia Motors. The fine involved a $300 million settlement for overstating vehicle fuel-economy standards on more than 1 million cars.

According to The New York Times, analysts say the crackdown is meant to send a clear message to automakers that circumventing federal rules will not be tolerated.

California, the EPA, and the Justice Department are working together on the investigation.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health. Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations," Ms. Giles told the Times.

LA Times:

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Volkswagen is accused of sidestepping emissions rules, 'cheating' pollution tests

By JERRY HIRSCH

Federal and California environmental regulators accused Volkswagen of using software that "cheats" pollution testing in nearly 500,000 recent model VWs and Audis by circumventing emission standards in its diesel cars.

The German automaker will eventually have to recall all of the vehicles and change the emissions systems at its own expense, regulators said. Additionally it could face a fine of about $18 billion, or $35,500 per car, federal environmental officials said.

The Environmental Protection Agency on Friday issued the German automaker a "notice of violation" of the Clean Air Act for both VW models and the company's Audi luxury brand. It covers models equipped with four-cylinder diesel engines. The California Air Resources Board issued a similar letter.

Volkswagen and Audi vehicles from model years 2009-2015 have the software, which uses an

algorithm that detects when the vehicle is undergoing pollution tests and changes the way it performs from when it is being driven on the open road.

It "is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "EPA is committed to making sure that all automakers play by the same rules."

"We expected better from VW," Giles said.

Air Resources Board Executive Officer Richard Corey said the California agency wants to bring the cars "into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

Volkswagen said it is cooperating with the investigation.

"We are unable to comment further at this time," the company said in a statement.

The affected diesel models include: Jetta (model years 2009 – 2015,) Beetle (model years 2009 – 2015,) Audi A3 (model years 2009 – 2015,) Golf (model years 2009 – 2015) and Passat (model years 2014-2015.)

Detroit Free Press:

http://www.freep.com/story/money/cars/2015/09/18/epa-volkswagen-used-software-skirt-emissions-rules/72399372/

EPA: Volkswagen used software to skirt emissions rules

By Greg Gardner

The U.S. Environmental Protection Agency and California are accusing Volkswagen of violating the Clean Air Act by using software that allows hundred of thousands of VW and Audi diesel-powered cars to get around emission standards.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for enforcement and compliance assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The agency's notice of violation covers about 482,000 diesel cars sold between 2009 and 2015 model years.

Affected diesel models include:

Jetta (model years 2009 – 2015)

Beetle (model years 2009 – 2015)

Audi A3 (model years 2009 – 2015)

Golf (model years 2009 – 2015)

Passat (model years 2014-2015)

California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board (CARB) have both initiated investigations based on Volkswagen's alleged actions.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said CARB executive officer Richard Corey. "Our goal is to ensure that the affected cars are brought into compliance, to dig

more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The federal and California regulators say Volkswagen used a sophisticated software algorithm on certain Volkswagen vehicles that detects when the car is undergoing official emissions testing and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations.

As a result the cars met emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the permissible standard. The software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

Corey said testing groups in Europe found information that indicated Volkswagen may have manipulated its emission tests and told California regulators about their suspicions.

NOx pollution contributes to nitrogen dioxide, ground-level ozone and fine particulate matter. Exposure to these pollutants has been linked with a range of serious health effects, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, elderly people and those with pre-existing respiratory disease are particularly at risk for health effects of these pollutants.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified. By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, Volkswagen violated two important provisions of the Clean Air Act.

EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization. The researchers raised questions about emissions levels, and the

agencies began further investigations into the issue. In September, after EPA and CARB demanded an explanation for the emission problems, Volkswagen admitted that the cars contained defeat devices.

VW may be liable for civil penalties of up to $37,500 per vehicle found to be violating the standard, or potentially more than $18 billion.

It is incumbent upon Volkswagen to initiate the process that will fix the cars' emissions systems. Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time.

AP (via ABC News):

http://abcnews.go.com/Politics/trump-candidates-criticize-donald-muslim-comments/story?id=33858500

EPA Says VW Intentionally Violates Clean Air Standards

By MATTHEW DALY, ASSOCIATED PRESS WASHINGTON — Sep 18, 2015, 12:42 PM ET

The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.

Mashable:

http://mashable.com/2015/09/18/volkswagen-recall-emissions/#uL1ctrM4JZkb

Volkswagen urged to recall cars for allegedly cheating emissions test

BY CHRIS PERKINS

Automakers are under intense pressure to meet emissions regulations put in place by the world's governments. Volkswagen allegedly had a slightly different solution.

The U.S. Environmental Protection Agency (EPA) ordered a recall of almost 500,000 Volkswagen and Audi vehicles equipped with four-cylinder diesel engines, for software designed to sidestep emissions regulations, reports the New York Times.

In total, 482,000 vehicles are being implicated, including the 2009-2015 Volkswagen Golf, Beetle, Jetta and Beetle, the 2014-2015 Volkswagen Passat and the 2009-2015 Audi A3. The cars were possibly installed with a "defeat device," a piece of software designed to detect when the car is undergoing emissions testing and turn on all of the car's emissions control systems then. In normal driving, the systems would turn off, causing 40 times larger nitrogen oxide emissions, according to the E.P.A.

Nitrogen oxide is a major contributor to smog, which can lead to increased respiratory problems

and premature death.

The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation. The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation.

U.S. regulators hope that this recall will send a message to automakers to not develop software to skirt regulations. Last November, Hyundai and Kia were fined $100 million for violating the Clean Air Act. The two companies inflated their fuel economy figures for their 2012 vehicles.

The likely reason why Volkswagen could go the trouble to develop and use software like this is to boost performance; emissions control equipment tends to suck power out of an engine.

Researchers from West Virginia University, working with the International Council on Clean Transportation, discovered the software, according to the EPA's press release.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time," said a representative for Volkswagen.

A representative for the EPA wasn't immediately available for comment.

It's unclear if this issue only pertains to U.S. model Volkswagens and Audis equipped with four-cylinder diesels, or their world-market counterparts as well.

A report from Jalopnik notes that all of Volkswagen's ads for its diesel models have been deleted from YouTube, apparently at the company's request.

John Senn

Deputy Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

(202) 564-8996 - senn.john@epa.gov

https://twitter.com/EPAJustice

To: Ex. 7 @vw.com]
From: Bunker, Byron
Sent: Fri 9/18/2015 8:14:33 PM
Subject: RE: Press Information

Here is the change we made. We added/redid this answer on our webpage to try to address the recall questions.

Is EPA officially requiring Volkswagen to issue a recall now?

No. EPA expects to compel VW to issue a recall in the future to reduce the emissions impacts of these vehicles. Owners will be notified of that recall once Volkswagen and Audi have developed a remedial plan and EPA has approved the plan. Manufacturers are given a reasonable amount of time to develop a plan to complete the repairs, including both the repair procedure and manufacture of any needed parts. Depending on the complexity of the repair and the lead time needed to obtain the necessary components, it could take up to one year to identify corrective actions, develop a recall plan, and issue recall notices

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

From: Ex. 7 @vw.com]
Sent: Friday, September 18, 2015 4:10 PM
To: Bunker, Byron

Subject: Press Information

Hello Byron,

If you do revise or try to clarify any messages to the public can you also forward to me?

Thanks,

Ex. 7

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Fri 9/18/2015 8:24:55 PM
Subject: DAILY: UAW-FCA workers would get extra holiday, extra pay under proposed deal | EPA targets VW, Audi diesels for emissions violations | Daimler bets $1.3B on SUVs | '16 Honda Civic: The early reviews

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FCA's U.S. car output to go to Mexico in UAW-deal production shuffle

September 18, 2015

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UAW-FCA workers would get extra holiday, extra pay under proposed contract

In addition to raises and bonuses, the tentative agreement between Fiat Chrysler and the UAW includes a number of benefit restorations as well as a guard against a threatened tax hit on UAW member's health care plans.

VW accused of using software in 482,000 diesels to skirt U.S. clean-air rules

Volkswagen and Audi sold about 482,000 diesel vehicles with illegal emissions control software designed to make their cars appear cleaner in testing than they are in the real world, the EPA said today.

MOST READ (Last 7 days)

FCA's U.S. car output to go to Mexico in UAW-deal production shuffle
UAW, Fiat Chrysler reach tentative labor deal
UAW, FCA pact ties

NEWS ANALYSIS

Daimler to invest $1.3 billion to expand Mercedes SUV plant in Alabama

GM's recall settlement frees Barra to confront new challenges

Hours after GM agreed to pay $900 million to settle criminal charges related to a bungled recall, CEO Mary Barra said the crisis that has shadowed her for nearly two years was "a catalyst for meaningful change."

Daimler AG will invest $1.3 billion at its Alabama plant to boost production of Mercedes-Benz SUVs, creating an additional 300 jobs. The expansion of the factory, which has built Mercedes vehicles since 1997, is geared toward development of the company's next generation of SUVs.

Honda says the 2016 Civic underwent "the most radical redesign" since the model debuted in 1972. Here's a roundup of what journalists, analysts and others are saying about the retooled sedan.

Parker bows to long-term goals

Ghosn hires TrueCar's Krafcik to steer auto project

UAW names Fiat Chrysler lead target in contract talks

Ghosn sees rough road ahead for industry disruptors

Corporate 'siloing' an obstacle to charging GM employees, prosecutor says

JCI targets 3,000 job cuts in salaried ranks

W.Va. dealership group pays $80,000 civil penalty over ads

BLOG: JAY RAMEY

Mercedes pickup won't be a 'fat cowboy truck'

BLOG: NEAL E. BOUDETTE

Wave your hand, watch the hood pop (minus grimy fingers)

Gentex transforms rear-view mirror into high-tech vision system

Canada's auto industry may need to accept concessions in Pacific trade talks, prime minister says

BLOG: **MIKE COLIAS**

Opel pins compact car comeback on Astra's posh comforts

Tesla struggles in Germany with consumers unswayed by Model S cult

Design legend Giugiaro plans return after Piech setback

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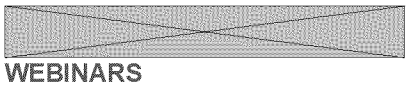
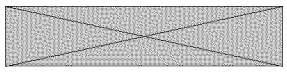


WEBINARS

» Sept. 22 at 2pm ET - Fixed Ops

» Sept. 22 - NY Marketing Seminar
» Oct. 1 - Automobilwoche Kongress
» Oct. 14 - Best Dealerships To Work For
» Jan. 12 - Automotive News World Congress

by CDK Global
» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM
» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive
» Oct. 7 at 2pm ET - Programmatic
by Rocket Fuel



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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Fri 9/18/2015 8:25:13 PM
Subject: DAILY: UAW-FCA workers would get extra holiday, extra pay under proposed deal | EPA targets VW, Audi diesels for emissions violations | Daimler bets $1.3B on SUVs | '16 Honda Civic: The early reviews

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September 18, 2015

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VW accused of using software in 482,000 diesels to skirt U.S. clean-air rules

Volkswagen and Audi sold about 482,000 diesel vehicles with illegal emissions control software designed to make their cars appear cleaner in testing than they are in the real world, the EPA said today.

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Ghosn sees rough road ahead for industry disruptors

Corporate 'siloing' an obstacle to charging GM employees, prosecutor says

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BLOG: JAY RAMEY

Mercedes pickup won't be a 'fat cowboy truck'

BLOG: NEAL E. BOUDETTE

Wave your hand, watch the hood pop (minus grimy fingers)

Gentex transforms rear-view mirror into high-tech vision system

Parker bows to long-term goals

Apple hires TrueCar's Kozloski to steer auto project

UAW names Fiat Chrysler lead target in contract talks

Canada's auto industry may need to accept concessions in Pacific trade talks, prime minister says

BLOG: **MIKE COLIAS**

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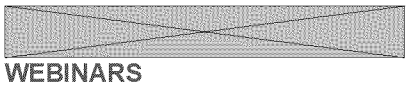

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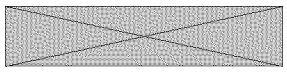
» Sept. 22 - NY Marketing Seminar
» Oct. 1 - Automobilwoche Kongress
» Oct. 14 - Best Dealerships To Work For
» Jan. 12 - Automotive News World Congress

by CDK Global
» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM
» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive
» Oct. 7 at 2pm ET - Programmatic
by Rocket Fuel



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To: Fisherow, Walter Benjamin (ENRD)[Walter.Benjamin.Fisherow@usdoj.gov]; Evan Belser[Belser.Evan@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Brooks, Phillip
Sent: Fri 9/18/2015 8:26:30 PM
Subject: Please see the attached that I just received

Ex. 5

From: European Parts [mailto:vwemporium@aol.com]
Sent: Friday, September 18, 2015 4:04 PM
To: vwemporium@aol.com; McDaniel, Doug; Pugliese, Holly; Ruske, Ross
Subject: Re: Some key points of interest EPA emission violations.

Attention EPA.....

Maybe I wasn't so wrong here, and shouldn't be ignored when stating something!

http://www.nytimes.com/2015/09/19/business/volkswagen-is-ordered-to-recall-nearly-500000-vehicles-over-emissions-software.html?hp&action=click&pgtype=Homepage&module=first-column-region&region=top-news&WT.nav=top-news&_r=0

Especially with very recent reports that seem to fall on deaf ears by me directly.

So you let this continue for 6 years.....?

Be advised VW-AUDI TFSI and TSI 2005> all do this for GAS cars..... not just diesels.

2000> ALL VW-AUDI supporting KWP 2000 updates have done this, additionally for misfire deletes or CAT thresholds by OEM and .....The AFT I very recently reported.

So I am being sued in Federal Court, by a Foreign National Company that purports this fraud, and illegal acts due to your failure to listen.

Seems not so fair, and I am extremely disappointed with Government right now, I have been hung out to dry. FAIL!

Sincerely,

Jack Shapiro E.P.E.
VAS>Geko ASE Extern
7076062 NYS DMV
SAE>NASTF

European Parts Emporium
Immobilizer Solutions
1001 State Route 17K
Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL/FAX
845-784-0335 Net

-----Original Message-----
From: Pugliese.Holly <Pugliese.Holly@epamail.epa.gov>
To: vwemporium <vwemporium@aol.com>
Cc: Chris.White <Chris.White@mail.house.gov>
Sent: Tue, Apr 6, 2010 9:42 am
Subject: Re: EPA VW Issue.

Mr. Shapiro.

The SVM tool allows for access to and the reconfiguration of manufacturer calibration information contained in VW's vehicle modules. Throughout the history of EPA's involvement in regulating service information, we have been supportive of manufacturer efforts to control and protect the access to the underlying computer code and/or the ability to change vehicle configurations. EPA has always asserted that, while aftermarket shops need the ability to reprogram emissions-related modules, access to the underlying code is not required to complete a repair. In fact, requiring manufacturers to allow such access would undermine EPA's anti-tampering laws which make a federal offense to intentionally or unintentionally alter the original EPA certified configurations of a vehicle.

EPA has worked closely with manufacturers and the aftermarket over the years to balance the needs of the aftermarket to be able to complete emissions-related repairs while allowing manufacturers to prevent tampering and manage liability. There is nothing in the regulations that require manufacturers to make available the means to do a repair in exactly the same manner as a dealer. In fact, the pass-through reprogramming provisions in our regulations specifically require manufacturers to adopt the generic industry standard developed by the Society of Automotive Engineers for pass-through reprogramming to ensure that aftermarket shops can perform reprogramming without having to invest in more costly manufacturer-specific tools that dealers are required to purchase to perform these same repairs.

VW has 3 options in place for the aftermarket to complete repairs such as this that require a security ID that you have been requesting.

- VW's fulfillment house provides a service whereby VW technical support staff can, through an on-line connection to the diagnostic tool, enter the password required to complete the operation

- VW's service information web site provides access to software that makes this function available for use with a lap top and a pass thru device. An enrollment process is required for security reasons, which EPA believes is reasonable.

- VW also participates in the Secure Data Release Model which was developed as a joint effort between manufacturers and the National Automotive Service Task Force which specifically designed to allow "registered" independents to obtain access to security information. An enrollment process is required for this as well.

While we understand that more sophisticated technicians may wish to have access to the underlying module information that some dealers have access to, EPA regulations do not compel manufacturers to do so if they have in place reasonable alternatives to complete the same repairs. In the case, we believe that VW has made available several reasonable options and therefore we do not think it is appropriate to require VW to release the SVM tool.

Regards,

Holly

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	03/18/2010 06:29 PM
Subject:	Re: EPA VW Issue.

Hello Holly,

The information I sent you was a simulation of what can be experienced but not exactly what I experienced, and I believe I was clear and apologize if I was not.
The module will not retain the coding in certain instances. It will become all zeros if there is a disruption on the gateway, or the grounds cause some sporadic spike for the ABS module etc.
Including power interruption as stated by VW, is correct if just pulling a fuse.

I experienced the coding of the ABS module to go to all zeros, however I could still communicate with the module and if you don't have the SVM access you cant configure the module even with the current base CD 16 other then via SVM.

Based on the final rule of 2003 I bought the tester VAS 5052 at full retail. I am entitled to the information, all services a dealer technician is to have access to. There was no crippled emissions only version made or offered in the USA at any time.

The repair information or the tester can't access the config of this module at all. It must enter a proprietary mode via the SVM server known as 83 communication mode, as I have stated before in order to recode, or install a new ABS module to config.

I have since figured out how to duplicate what I have stated above, by not removing a fuse, and can send you screen shots as well as a data log of the communication to prove you, your obd engineer and VW are incorrect.

This is also incorrect in regards to the following statement with answers .

"EPA OBD engineers have reviewed the additional information you provided to us and we consulted with VW. VW advised us that they are aware of the fact that, when an ABS module has a loss of communication, it will not communicate the long code data, as it has lost communication. According to VW, the module itself does not lose the data, (INCORRECT not each time) **it merely cannot broadcast it when it has lost communication. When power to the module is restored, the long coding data can then be read.** *(THIS IS INCORRECT!) (You can only read that it is now zero long coding string lost, you can talk to the module of the ABS but it has lost its config as I have stated previous. At this point you require SVM via the GTI test plan or any other for this driveline)*
The test you conducted by removing a fuse to simulate the bad ground the car had initially (as shown in the screen shots you provided) *(YES BASED ON THE SCREEN SHOTS I PROVIDED BUT I ALSO ASKED YOU IF YOU REQUIRED MORE DETAILED DATA AND ALSO DESCRIBED THE PROBLEM LONG BEFORE TO YOU IN PREVIOUS EMAILS)* ***subsequently set codes in all other*** **modules indicating that no communication was received from the ABS module. Again, a module will not communicate on the bus if it has lost power supply. When the power is restored, the module will show all data, and can be read with a scan tool. This module does not require reprogramming or reconfiguration as this information is retained in the module.** *(THIS IS ALSO INCORRECT. Not in all cases such as the one I have requested the data in regards to.)*

According to VW service information is available to aftermarket shops for all models that receive vehicle speed from the ABS controller. In addition, service diagnostics information is available for all VW platforms to diagnose the "Loss of Communication" fault that you reported, regardless of the actual location of the vehicle speed sensor (VSS). VW also has a technical service bulletin for a scan tool software release 14.88.00 (released Aug. 7, 08) "that may not code these modules correctly and it will take SW 14.89.00 (released Sept. 17, 08) before this condition is corrected". *(THIS HAS NEVER BEEN CORRECTED BECAUSE THE VAS 5052 TESTER CANT ENTER 83 MODE MANUALLY OTHER THEN VIA THE SVM SERVER TO DATE AUTOMATICALLY)*

Scenario :

OK for example: If you have a a faulty abs module. Which will not communicate with the above condition for example, power loss IE grounds, water damage, etc. You require a new abs ECU. I install a new one, Its factory default coding will be coded all zeros. I plug in my VAS 5052 tester purchased from VW with a full up to date subscription of base 16 In order to configure. I am then asked by the tester for my Username and password for Geko access for SVM to finish the repair.
Hence why I am asking for your assistance in this matter!
VW wont allow login for geko cars below 2010.

And

I believe this is an important safety issue as well.

Please provide the proper contacts if you have them.

I believe this is still a EPA authority based on the final rule. As I have stated above. Am I incorrect with what I have stated in regards to buying a complete factory tester at full retail price?
I purchased my tool in good faith with the impression I would be able to perform safe and complete repairs to compete with the dealer network on a fair playing field, to provide safe and emission compliant repairs as I am required to by law as per the DMV regulations of NYS as a licensed repair facility.

Please advise

Regards,

Jack Shapiro

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: Chris.White@mail.house.gov
Sent: Thu, Mar 18, 2010 3:49 pm
Subject: Re: EPA VW Issue.

Mr. Shapiro:

Based on the additional information you provided to us, it seems the fundamental issue you are having after conducting the GTI test plan is that you are still unable to read the long code data for the ABS module with a U0121 code set. It is your position that this is an emissions-related issue and that the aftermarket must have access to VW's SVM tool in order to properly perform a repair as there is no technician help line available for independent technicians.

Based on the information you provided to us, it appears that you were attempting to read ABS information when the module did not have a proper power supply (i.e. bad ground).

EPA OBD engineers have reviewed the additional information you provided to us and we consulted with VW. VW advised us that they are aware of the fact that, when an ABS module has a loss of communication, it will not communicate the long code data, as it has lost communication. According to

VW, the module itself does not lose the data, it merely cannot broadcast it when it has lost communication. When power to the module is restored, the long coding data can then be read.
The test you conducted by removing a fuse to simulate the bad ground the car had initially (as shown in the screen shots you provided) subsequently set codes in all other modules indicating that no communication was received from the ABS module. Again, a module will not communicate on the bus if it has lost power supply. When the power is restored, the module will show all data, and can be read with a scan tool. This module does not require reprogramming or reconfiguration as this information is retained in the module.

According to VW service information is available to aftermarket shops for all models that receive vehicle speed from the ABS controller. In addition, service diagnostics information is available for all VW platforms to diagnose the “Loss of Communication” fault that you reported, regardless of the actual location of the vehicle speed sensor (VSS). VW also has a technical service bulletin for a scan tool software release 14.88.00 (released Aug. 7, 08) "that may not code these modules correctly and it will take SW 14.89.00 (released Sept. 17, 08) before this condition is corrected".

After reviewing the information you provided, we have concluded that the SVM tool is not necessary for this particular repair and that EPA does not have the legal authority to require the release of the SVM tool.

Regards,

Holly Pugliese
US EPA

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	03/18/2010 12:02 PM
Subject:	Re: EPA VW Issue.

Hello Holly,

Is there a response?

I also wanted you to be advised I requested a username and password again via a customer advocate verbally over the telephone.

Ref # 100119652

There response was to inform me over the phone, VW, has not changed there position.

I let them know I would be moving forward civil and on a media level if they could not supply a use of this service in 30 days.

I asked them to reconsider there position on the matter.

I was wondering have they reconsidered allowing me access to this service through you and do you have the power to enforce this if they have not?

Regards,

Jack Shapiro

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: Chris.White@mail.house.gov
Sent: Wed, Mar 10, 2010 3:42 pm
Subject: Re: EPA VW Issue.

We are working on a formal response which we should have for you by the end of the week. Thank you for your patience.

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	03/08/2010 02:45 PM
Subject:	EPA VW Issue.

Hello Holy Pugliese EPA,

Is there any information in regards to this issue with VW-Audi for the SVM-GEKO system?
It has been many months with no information.

Do you require any additional information?
Do you have correspondence form VW-Audi for me to review for rebuttal?

Best,

Jack Shapiro

Hello Holly Pugliese EPA

Please see data attached via scan of my car 2009 TDI.
If you require screen shots of the VAS 5052 or repair data to back up my previous statements for this car, or other earlier cars with similar issues prior to 2010 requiring SVM potentially, let me know.

This was induced by pulling a fuse to simulate the bad ground the car had initially, also causing the con fig of the ABS long coding to become all zeros.

TSB/TECH tip reference to support such claims below that an issue existed even on the dealer level.

TSB/Tech tip which we as independents didn't get access to until end Dec of 2008.

TT 45-08-05

2009 Jetta, GTI, EOS, Rabbit - ABS Module Long Coding

The above listed vehicles are equipped with a long coded ABS module. Tester software (SW) 14.88.00 may not code these modules correctly and it will take SW 14.89.00 before this condition is corrected. In the meantime, please read out any long coded ABS units before replacing the ABS module or the instrument cluster, in order to manually reinstall the coding in a replacement part. If the coding has been lost for any reason, try to code through the GTI test plan and, if an error is still returned, contact the VW Technician's Help line. A workaround process is in place.

After conducting this test path the only thing left is SVM as there is no Tech help line open to independents.

Please advise.

Best,
Jack Shapiro

Proprietary area of scanner :

1 Fault Found:
049441 - No Communication with ABS Brake Control Module
U0121 - 000 - - - Intermittent
Freeze Frame:
Fault Status: 00100000
Fault Priority: 2
Fault Frequency: 1
Mileage: 2737 km
Time Indication: 0
Date: 2000.00.00
Time: 01:07:05

OBD2 mode of scanner waiting to pend with problem induced to recreate.
With reset of DTC's still showing pend for issue.

Mode 07: Pending emission related fault codes
Address 7E8: 1 Fault Found:
U0121 - No Communication with ABS Brake Control Module

Mode 9 : Calibration Identification
Type 02 - VIN : 3VWAL71K19M007485 (Address E8)
Type 04 - Calibration ID : 03L997016N 5109 (Address E8)
Type 06 - Calibration Verification Number : F8D4A8FC (Address E8)
Type 0A - Controller Name : ECM-Engine Control (Address E8)

Mode 07: Pending emission related fault codes
Address 7E8: 1 Fault Found:
U0121 - No Communication with ABS Brake Control Module

OBD DTCs erased

Mode 07: Pending emission related fault codes
Address 7E8: 1 Fault Found:
U0121 - No Communication with ABS Brake Control Module

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Sent: Fri, Jan 8, 2010 8:18 am
Subject: Re: update on EPA discussion with VW

If I understand you correctly, you are suggesting that access is needed to ABS and other systems through SVM because they trigger emissions related DTCs? Is that correct? I just want to make sure I understand your assertion so I can communicate further with VW.

thanks..

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	01/07/2010 04:02 PM
Subject:	Re: update on EPA discussion with VW

Mrs. Pugliese,

I believe I have made myself very clear here and I am not only referring to the Immobilizer program when referring to the technical service bulletin I provided you.

The program I have specifically referred to is **SVM**

SVM: stands for Software Version Management. (This also requires a user name and password for Geko even for cars below 2010) Cars that may require coding range from 1989> from the introduction of the VAG1551 to present day which clearly states will effect emissions if not done proper via the repair manual.
The repair manual used to contain the coding and long coding data to configure these options. It has been deliberately removed and I can prove this if you require.
They moved it to the factory tester and then to the online server via **SVM.**

This was denied to me on my very own VW Jetta TDI 2009 car via the factory tester. For long coding the ABS and ESP to the car to work with the engine ECU which clearly displayed a fault for the impairment. A DTC constitutes failure of emissions in the engine ECU. when informed via the gateway that the ABS is at odds.

This access is required in order to perform emissions related repairs.

As I have said in your final rule they must make available all the same services of the factory tester to me that they provide to there dealership even if non related to emissions due to not selling a crippled emissions version only. This would have been registered with you and was not ever to this day or at time I purchased my OEM VAS 5052 factory scanner.

Please advise,

Jack Shapiro

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: Chris.White@mail.house.gov
Sent: Thu, Jan 7, 2010 3:10 pm
Subject: Re: Fwd: update on EPA discussion with VW

Mr. Shaprio. Attached is a summary of EPA's finding regarding the VW issues that have been raised to us. In short, we do not believe that VW is in violation of EPA's service information regulations based on the the information we have been provided to date. Please read through this and if you have any questions or additional information you would like us to consider, please let me know.

Regards,

Holly Pugliese
US EPA

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	12/28/2009 01:53 PM
Subject:	Fwd: update on EPA discussion with VW

Hello Mrs. Pugliese EPA US Federal Government,

I have left 3 phone messages in your office since the end of Oct. With the last one today being left.

Is there anything to report on the status of this situation?

VW-Audi yet again has modified the procedure of which to perform the actions required and still have not made available an SVM program with Geko program that is in the same fair competition manner as there franchises to the aftermarket repair shop.

They have changed suppliers and criteria in which they supply information again.

I have been told via a letter they will no longer supply technical bulletins in the manner they have in the past.
Keep in mind these bulletins are the ones we submitted to you with the evidence supplied.

What are you doing about this?

When do I get a username and password to access SVM Geko, the same information and repair procedures/instructions for the factory scanner I purchased from VW-Audi at not a reduced price that was registered with the EPA? In the same manner as a franchise with all required data in order to perform repairs.

Best Regards,
Jack Shapiro

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Sent: Thu, Oct 15, 2009 1:04 pm
Subject: Re: update on EPA discussion with VW

Hi Jack and thanks for the additional info. I don't have anything in writing to share with you at this point. We have had a few conference calls and EPA is analyzing the situation so we can make a decision. I don't think I need anything else from you at this point, I have all of the the e-mails you sent to Jim Clyne so I will keep you posted.

Thanks.

Holly

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	10/14/2009 12:18 PM
Subject:	Re: update on EPA discussion with VW

t Hello Mrs. Pugliese,

This is not just about service information.
It was also in regards to the factory tester not being supported which I purchased from them and a subscription I'm currently maintaining. However I'm not getting nor have I been given access to the same services as the dealer level for the machine. User name and password for GEKO and SVM server access in order to configure control units and marry immoblizers. They are separate services.

Has VW-Audi provided you with any documentation that I may review so I may further research what they state in writing to you?

I am beyond confident I can prove what I have submitted already.
If you require any information or an outside understanding of a service please ask me.
It is my understanding that VW-Audi has purposely tried to convolute the data in order to make it seem like they comply to the EPA and Federal Government when they clearly do not with there Geko program.

I am clearly not referring to Pass-Thru in regards to the functions of the factory tester that have been denied to me. Pass-Thru has only recently become available and the services are still not there I describe. This data has been withheld from me for several years.

Additionally I purchased a life membership for Geko through Resolve Archway Corp on behalf of VW-Audi many years ago. I have already passed a back ground check, am bonded in the state of NY Licensed as a retail repair facility and dealer. They are now trying to change these conditions along with make me sign a different contract using a Pass-Thru device.

I request you enforce them to make the machine VAS 5052 supported as there dealers use that I purchased with the same services extended to me with continuity.

Please advise

Best,

Jack Shapiro

European Parts Emporium
1001 State Route 17K
Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL
845-457-9462
845-457-9461 FAX

NYS DMV LIC # 7076062

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: jjclyne@gw.dec.state.ny.us
Sent: Wed, Oct 14, 2009 11:31 am
Subject: update on EPA discussion with VW

Hello Mr. Shapiro. This is a quick note to let you know that EPA is in conversations with VW on the recent issues you raised regarding the availability of their service information. We haven't come to any conclusions yet, but I will keep you posted. If you have any questions in the meantime, please contact me directly.

Regards,

Holly Pugliese
US EPA
734-214-4288
pugliese.holly@epa.gov

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Tuesday, May 11, 2010 2:50 PM
To: Immekus, Kurt; VWoA Tech Info; vwgoa@arvatousa.com
Cc: Pugliese.Holly@epamail.epa.gov
Subject: Fwd: New VW and Audi Immobilizer Program GEKO ID request

Hello Kurt, Vwgoa, Arvato,

Correction, Uwe Ross said you left him a message on Thursday the 6th, he was on vacation.

He has advised me he will be returning your call.

To keep you advised of what I have knowledge of.

However, Mr. Bierdümpfel has not received an inquiry according to him.

Please see his e-mail below.

Best,

Jack Shapiro

-----Original Message-----
From: vwemporium@aol.com
To: Kurt.Immekus@vw.com
Cc: Pugliese.Holly@epamail.epa.gov; Uwe@Ross-Tech.com
Sent: Fri, May 7, 2010 10:47 am
Subject: Fwd: New VW and Audi Immobilizer Program GEKO ID request

Hello Kurt,

Maybe they have not returned your call or inquiry because there was not one according to them.

Just in case.

Here is an e-mail from Mr. Bierdümpfel.

Additionally.

Contact information for Uwe Ross.

Uwe Ross

Ross-Tech

Uwe@ross-tech.com

Work 267-638-2300 ext 110

Best,

Jack Shapiro

-----Original Message-----
From: KARLYN16@aol.com
To: vwemporium@aol.com
Cc: Kurt.Immekus@vw.com
Sent: Fri, May 7, 2010 10:29 am
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request

Hello Jack,

Nobody from VW has contacted me about your references.

They are welcome to contact me at anytime.

Best Regards,

Karl
Karl Bierdümpfel

Karlyn Industries Inc.

(845) 351-2249

In a message dated 5/7/2010 10:21:54 A.M. Eastern Daylight Time, vwemporium@aol.com writes:

> Hello Karl,
>
> VW says you haven't given a reference or returned there contact.
>
> Please advise,
>
> best,
>
> Jack Shapiro

-----Original Message-----
From: Immekus, Kurt <Kurt.Immekus@vw.com>
To: vwemporium@aol.com
Sent: Fri, May 7, 2010 7:43 am
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request

The ID usually takes a couple of weeks, plus I haven't heard back from your references.

Thank You for asking

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Thursday, May 06, 2010 4:55 PM
To: Immekus, Kurt; vwgoa@arvatousa.com; VWoA Tech Info
Cc: Pugliese.Holly@epamail.epa.gov
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request

Hello Kurt, Arvato, Vw-techinfo,

It has been over three days. What is the status of the application for Geko.

Do you require anything else?

Please advise,

Best,

Jack Shapiro

-----Original Message-----
From: Immekus, Kurt <Kurt.Immekus@vw.com>
To: vwemporium@aol.com
Sent: Fri, Apr 30, 2010 3:17 pm
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request

Thanks Jack

We will begin processing

Regards

Kurt

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Friday, April 30, 2010 3:05 PM
To: Immekus, Kurt
Cc: VWoA Tech Info; vwgoa@arvatousa.com; Pugliese.Holly@epamail.epa.gov
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request

VWGoA,

Arvato,

Techinfo,

Hello Kurt,

You should know this.

One of the documents you sent is corrupt. I was able to fix and print via paint.

The fields were all screwy. I attached a repaired one for you as well in fixed_doc.PNG.

I sent my documents via fax.

Here they are again just in case attached labeled
Jack_Shapiro_LSID_S8MV2T35_NYS_7076062_IRF_403738.pdf

Best,

Jack Shapiro

European Parts Emporium

1001 State Route 17K

Montgomery New York 12549 USA

845-457-9808 TEL.

845-457-9461 FAX

vwemporium@aol.com

7076062 NYS DMV LICENSE

IRF 403738

FED/NYS Tax ID 14-178-8811

NASTF LSID # S8MV2T35

-----Original Message-----
From: Immekus, Kurt <Kurt.Immekus@vw.com>
To: vwemporium@aol.com
Sent: Thu, Apr 29, 2010 1:59 pm
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request

Hello,

Fill out the two attached forms and fax them back to the Fax number provided.

Thank You

Erwin Support

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Thursday, April 29, 2010 12:27 PM
To: Immekus, Kurt; vwgoa@arvatousa.com; VWoA Tech Info
Cc: Pugliese.Holly@epamail.epa.gov
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request

Hello VW-Audi Arvato, Kurt, Eddie

I would like my account activated for username and password for my VAS5052 for GEKO

My NASTF LSID # s8mv2t35

My IRF # is 403738

I am currently registered for the older Geko program for remote take over access.

Please advise of any additional information you require.

Regards,

Jack Shapiro

Euopean Parts Emporium

1001 State Route 17K

Montgomery New York 12549 USA

845-457-9808 TEL

845-457-9461 FAX
vwemporium@aol.com

-----Original Message-----
From: Immekus, Kurt <Kurt.Immekus@vw.com>
To: vwemporium@aol.com; vwgoa@arvatousa.com; VWoA Tech Info <TechInfo@vw.com>
Cc: Pugliese.Holly@epamail.epa.gov; Chris.White@mail.house.gov
Sent: Wed, Mar 31, 2010 7:32 am
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request

Hello Jack,

As explained in the communications distributed last year, to get a security ID for the laptop based system you still need to fill out the application forms listed in the 2010 Immobilizer instructions under the reprogramming heading on the home page of the web site. To get a Geko Id for your VAS device which includes access to security features you must participate in the NASTF secure data release model by completing the application for a Locksmith ID.

Thank You

Kurt Immekus

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Tuesday, March 30, 2010 6:35 PM
To: vwgoa@arvatousa.com; VWoA Tech Info; Immekus, Kurt
Cc: Pugliese.Holly@epamail.epa.gov; Chris.White@mail.house.gov
Subject: Fwd: New VW and Audi Immobilizer Program GEKO ID request

Hello Eddie, Kurt, and whom it may concern @ VW-Audi

Kurt I have left you a voice mail @ 4:10PM today in regards to this.

I require a user name and password for both **Pass-thru and the VAS 5052 for GEKO** so please don't be confused.

I own both a VAS 5052 and a ACTIA Pass-Thru XS device.

I am currently registered for the GEKO pin program for 2009 and earler vehicles for remote take over access of my VAS 5052 tester.

This is part 2 of the document provided by the EPA but it is not referenced on your web site with continuity in regards to the VAS testers.

2010 model year vehicles and later:

o Immobilizer reprogramming is done directly via the Erwin site and does not require interaction with the fulfillment house and is $29.95 per instance

o The process can either be done with a ***VAS 5052 or a J2534 pass-thru*** cable and a laptop for shops who do not own the VW specific tool.

o A GeKo ID is required for this process. Aftermarket shops who are already registered will need to re-register with VW, but do not have to pay the $100 fee. A shop who has never registered with VW will need to do so and pay the one time $100 fee.

Eddie I don't understand how you could not understand what I was asking but you can see below the Geko information is to be requested from you for 2010 and newer vehicles from Arvato.

It doesn't include the VAS 5052 so maybe this is where you may have misunderstood me in the prior e-mail.

https://erwin.vw.com/erwin/showVasIndex.do

Again please escalate this matter because I have been requesting this data since 2008 OCT>

I have now sent in two applications to Resolve corp in AUG of 2009 and Dec 2009 with no response.

I also tried in AUG of 2009 to register with the NASTF but they were not ready before you released the program data criteria which you changed anyway.

I have correspondense from the CEO of the NASTF to back up what I'm saying.

If there is documetation or fees required please advise.

Regards,

Jack Shapiro

European Parts Emporium

1001 State Route 17K

Montgomery New York 12549 USA

845-457-9808 TEL

845-457-9461 FAX

vwemporium@aol.com

Important:

For pre 2010 pass-thru Immobilizer Instructions please read the following document:
VW Revised Immobilizer Service Program for independent Workshops.

For 2010 and beyond pass-thru Immobilizer Instructions, please read and follow the directions below.

Overview - Introduction

The Anti-theft Immobilizer system on Audi, Bentley, Lamborghini and Volkswagen vehicles, prevents the engine from being started by unauthorized means.

Some vehicle electrical system control modules that monitor or control engine emissions, as well as some related modules, are integrated with the Anti-theft Immobilizer system.

Table of Contents

- Introduction: Before you Begin
- Devices: Recommended Pass-Thru Devices
- Setup: Immobilizer PC Setup

Step by Step

- ○ Step 1: Complete Pass-Thru Enrollment Forms

- ○ Step 2: Install VWGoA Certificate
- ○ Step 3: Register for erWin
- ○ Step 4: Download VAS for PC Base Software
- ○ Step 5: Download VAS for PC Brand Software
- ○ Step 6: Purchasing a 24 Hour Immobilizer License
- ○ Step 7: Perform Immobilizer Adaption

Before You can Replace an emission part

Should an emissions related control module that is integrated with the anti-theft immobilizer system require replacement, the new module must be adapted to the anti-theft immobilizer system. Adaptation is required for secure data communication between all vehicle system modules that are integrated with the immobilizer system. Module examples are: Engine Control Module (ECM) and Transmission Control Module (TCM), anti-theft immobilizer control module or instrument cluster, and vehicle keys.

The VAS for PC software enables immobilizer adaptation of applicable control modules on *m.y. 2010 and newer*, Audi, Bentley, Lamborghini and Volkswagen vehicles. Users are guided through the adaptation process via an interactive graphics and text interface.

Requirements for using the VAS for PC software:

- You have enrolled into the program Step 1: Complete Pass Thru Enrollment Forms
- You have received an email from VWGoA that contains a Security ID and Password to access the immobilizer application hosted in Germany
- You have received an email from VWGoA that contains a certificate file (e.g. IndepeDeale.30001.300999.pfx)
- You have installed the certificate onto your PC
- You have obtained a J 2534-1 Pass Thru device Recommend Devices
- You have the JVM 1.4.2_15 or later installed on your PC: For the latest Java update, click http://www.java.com
- Your computer environment meets the requirements outlined in Immobilizer for PC Setup

Recommended J 25434-1 Pass-Thru devices

Pass thru devices are available for purchase from a recommended Manufacturer for registered workshops to perform Immobilizer functions. The Pass Thru devices that have been tested to work with VAS for PC follow:

- Passthru+ XS (Firma: I+ME ACTIA GmbH): Firmware 2.07o, Driver 2.07p
  Available from ACTIA Corp.
  http://www.passthruxs.com or (734) 266-2083
- CarDAQ-Plus cable bundle (Drew Technologies): Firmware 01.09.14, Driver 01.09.16
  Available from Drew Technologies, Inc.
  http://www.drewtech.com or (734) 222-5228
- iFlash 2534 Global Programmer (Bluestreak): Firmware 2.11, Driver 5.20
  Available from Blue Streak Electronics
  http://www.bsecorp.com or (905) 669-4812

Email at Info@bsecorp.com

- VSI-2534 Vehicle Connection (Dearborn Group Technology): Firmware 1_112, Driver 2_05_22
  Available from Dearborn Group Technology
  http://www.dgtech.com/

Notes:

- Currently, Pass Thru re-programming supports SAE J2534-1 version 4.04 only.
- Please ensure that you have installed the appropriate driver for your Pass Thru device.
- For details read the documentation shipped with your device or contact the manufacturer.

Immobilizer for PC Setup

Minimum System Requirements

PC:

- CPU 1.7 GHZ
- RAM 1 GB
- Graphics 1024x768
- Hard Disk 10 GB Available
- USB USB connection for Pass-Thru-Box
- DVD
- LAN 100 Mb Broadband

Diagnostics:

- J 2543-1 Pass Thru device
- Battery Charger connected to vehicle during adaption

Warning:

- VAS adaption drains car batteries very quickly. If the battery charge depletes before adaption finishes, permanent damage to modules integrated with the immobilizer system could occur.

Software:

- Windows XP Professional (Service Pack 2) OR Windows 2000 (SP 4)
- VAS for PC Base CD or erWIN download (v16.12 or later)
- VAS for PC Make CD(s) or erWIN download (Audi, Bentley, Lamborghini, and/or VW)
- Microsoft Internet Explorer 6.0 SP 2, plus:
  - Microsoft XML Parser 4.0 SP2

- ○ Adobe Acrobat Reader 5.05
- ○ Java 2 Runtime Environment 1.4.2_15. For the latest Java update, click http://www.java.com

VAS for PC System Limitations

The VAS for PC application is designed to adapt modules to the anti-theft immobilizer system on MY 2010 or later vehicles only. The software must be run when replacing emissions related parts such as the ECM, TCM, IC, vehicle keys, and the anti-theft immobilizer control module. This software package includes the following product components:

- VAS for PC Base software (Ver. 16.12 or later)
- VAS for PC Make software matching the brand(s) you repair: Audi, Bentley, Lamborghini, and/or VW.

Note:

Using this product for any purpose other than adapting emissions related parts to the immobilizer system is not recommended or supported.

Link to Manuals: Siemens VAS for PC Manual, Quick Reference and Troubleshooting document

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Step 1: Complete Pass Thru Enrollment Forms

What's needed?

- You must have a broadband internet connection
- You must be a licensed Independent Workshop with a Windows 2000 or XP computer see minimum requirements

How?

Step 1. Contact: Arvato at (800) 544-8021 or Mail to: vwgoa@arvatousa.com
Arvato will provide you with the following enrollment forms.

- VWGoA Immobilizer Service Application
- VWGoA Network Security ID Request form

Step 2. You must complete and submit the forms along with your business license documentation

and a $100.00 Application Fee.

Notes: Your application will be approved within 5 business days of receiving the application fee. If denied, an explanation and full refund will be provided.
For approved applications, there is an additional 72 hour processing period required to issue your workshop a Network Security ID and Password.
An approved registration is good for 18 months from the time of application.

Step 3. Once approved you will receive 3 emails from VWGoA Information.security@vw.com. The emails will contain the following:

- Your VWGoA Certificate (e.g. IndepeDeale.30001.300999.pfx)
- Your Network Security User ID
- Your Network Security Password (sent in a separate email for security reasons)

Step 4. Install the VWGoA Certificate into your Windows Certificate Store Step 2: Install VWGoA Certificate

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Step 2: Install VWGoA Certificate

What's needed?

- You must have received a certificate from Information.security@vw.com.
- You must have administrator access to your PC

How?

Step 1.

- Open the email sent to you from Information.security@vw.com that contains the cetificate file.
- The email attachment you receive will follow a naming convention that looks similar to the following: IndepeDeale.30000.60599.pfx.

Notes about the Certificate Import Wizard:

- On the "File To" Import screen, click Browse to locate the certificate file on your desktop or in the folder you created.
- On the "Password" screen, leave all the fields blank, and then click Next.li>
- On the Certificate Store Screen, check the "Automatically select the certificate store based on the type of certificate"

- Download the VAS for PC software from erWIN Step 4: Download VAW for PC Base Software from erWin

Step 3: Register for erWin

What's needed?

- You must have a broadband internet connection

How?

Step 1. Logon to the erWin site branded for the type of vehicle you repair.

- For Audi, Bentley, and/or Lamborghini, your erWIN site is: http://erwin.audiusa.com
- For VW brand vehicles, your erWIN site is: http://erwin.vw.com

Step 3. Complete the registration information, and then check the VWGoA terms and agreements stipulated by VWGoA and the erWIN distribution site (i.e. arvato).

Step 4: Download VAS for PC Base Software from erWin

What's needed?

- You must have previously installed the certificate you received from Information.security@vw.com. See Step 2.

- You must have administrator access to your PC and uninterrupted broadband access to the Internet

  Note: Alternatively, you can order a CD from arvato by calling 800 544-8021 or requesting a CD by email (vwgoa@arvatousa.com).
- You must have previously installed JVM 1.4.2_15 on your PC to update your Java version, click http://java.com and select Free Download.

How?

Step 1. Open the erWIN website dedicated to the brand of vehicle your workshop repairs.

- If you repair VW cars, click http://erwin.vw.com
- If you repair Audi, Bentley, or Lamborghini cars, click http://erwin.audiusa.com

Step 2. Click Reprogramming from the menu on the right-side of the page (Audi) or top of the page (VW), and then double-click the *"Immobilizer SW Download"* option:

Notes about Base Software Installation:

- In the figure above, the latest version is “Adaption Functions, base data version V16.12”. Yours might be different
- When browsing for a folder to download the software into, remember where it is located. You’ll need to find it to later to install the VAS for PC software onto your PC

Step 4. Locate the folder where the software was downloaded, and then double-click the file to start the VAS for PC Base CD installation process.

The installation process should look similar to the following:

Notes:

- There might be as many as 3 items placed on your Windows Desktop and Start Menu. The icon you want is labeled, “Adaption functions,” which will run the VAS for PC software
- For information on the other items you see (e.g. VC Configurator and DTS folder), refer to the VAS for PC manual

Step 6. Return to erWin website and download the brand software modules that correspond to the types of cars you repair. Step 5:Download VAS for PC Brand software from erWIN

Step 5: Download VAS for PC Brand software from erWin

What's needed

- You must have previously installed the certificate you received from Information.security@vw.com Step 2: Certificate Installation
- You must have downloaded and successfully installed the VAS for PC base software Step 4: Download VAS for PC Base Software from erWin

How?

Step 1. To install the Brand CD, open the erWIN website dedicated to the brand of vehicle your workshop repairs.

- If you repair VW cars, click http://erwin.vw.com
- If you repair Audi, Bentley, or Lamborghini cars, click http://erwin.audiusa.com

Step 2. Click Reprogramming from the menu on the right-side of the page (Audi) or top of the page (VW), and then click the *"Immobilizer SW Download"* option:

- When browsing for a folder to download to, remember where it is located. You'll need to find it later to install the VAS for PC software onto your PC.

Notes about Brand Software Unzipping

- Many files will be added to the folder you choose. Remember this folder because you'll need it later when you add brand adaption functions to your VAS for PC software.

Step 8. If you're ready for immobilizer adaption, purchase a license from the erWin web site. Step 6: Purchasing a 24 Hour Immobilizer License

Step 6: Purchasing a 24 Hour Immobilizer License

What's needed?

- You must have previously installed the certificate you received from Information.security@vw.com Step 2: Intsall VWGoA Certificate
- You must be a registered erWin user Step 3: Register for erWin
- You must have received an email from Information.security@vw.com containing a Network Security ID and Password
- You must have downloaded and successfully installed the VAS for PC base software Step 4: Download VAS for PC Base Software from erWin
- You must have downloaded and successfully installed the VAS for PC brand software Step 5: Download VAS for PC Brand Software from erWin

How?

Step 1. Logon to the erWin website dedicated to the brand of vehicle your workshop repairs.

- If you repair VW cars, click http://erwin.vw.com
- If you repair Audi, Bentley, or Lamborghini cars, click http://erwin.audiusa.com

Step 2. Click Reprogramming from the menu on the right-side of the page (Audi) or top of the page (VW), and then click the *"Immobilizer License Order"* option:

Step 3. Select the duration of the VAS for PC license you want to purchase from the drop-down menu provided.
At this time, the only duration available is 24 hours.

Step 4. If you have a MY 2010 vehicle ready for immobilizer adaption, see Step 7: Perform Immobilizer Adaption

---

Step 7: Perform Immobilizer Adaption

What's needed?

- You must have previously installed the certificate you received from Information.security@vw.com Step 2: Install VWGoA Certificate

- You must be a registered erWin user Step 3: Register for erWin
- You must have received an email from Information.security@vw.com containing a Network Security ID and Password
- You must have downloaded and successfully installed the VAS for PC base software Step 4: Download VAS for PC Base Software from erWin
- You must have downloaded and successfully installed the VAS for PC brand software Step 5: Download VAS for PC Brand Software from erWin
- You must have a valid 24 Hour immobilizer reset license Step 6: Purchasing a 24 Hour Immobilizer License
- You must have a *MY 2010 or later vehicle* repaired and attached to the VAS for PC computer you are using.

How?

Step 1. Follow the adaption immobilizer instructions described in the VAS for PC Quick Reference document..

Note:

- If you need more information on how the VAS for PC software functions than what is covered in the Guided Tour document, refer to the VWGoA VAS for PC Manual.

-----Original Message-----
From: vwemporium@aol.com
To: vwgoa@arvatousa.com
Cc: Pugliese.Holly@epamail.epa.gov; Chris.White@mail.house.gov; techinfo@vw.com
Sent: Tue, Mar 30, 2010 11:49 am
Subject: Re: New VW and Audi Immobilizer Program GEKO ID request

Hello Eddie

This is correct. But not without remote access and not for 2010 vehicles or newer

I however don't have a GEKO username and password for the VAS 5052 for 2010 and newer vehicles or earlier.

Could you please provide so I may perform tasks like other independents are claiming they now have access to without remote access appointment.

It is also what has been being promised since 2008 but has never been made available.

Could you please call me. @ TEL 845-457-9808

I have contacted Kurt Immekus directly, he had claimed it didn't exist. Like he did to the person I spoke to last night which is an independent GEKO user without restriction, he claims now but took him six or better months to get and it recently appeared in Jan of 2010 after contacting someone here at Arvato/VW-Audi complaining.

Please provide Username and password or requirements to achieve this task.

Best,

Jack Shapiro

-----Original Message-----
From: Mailbox, Volkswagen, arvato digital services llc <vwgoa@arvatousa.com>
To: vwemporium@aol.com <vwemporium@aol.com>
Sent: Tue, Mar 30, 2010 11:23 am
Subject: RE: New VW and Audi Immobilizer Program GEKO ID request

Hello Jack,

Thank you for contacting the Volkswagen / Audi Technical Literature Ordering Center.

I am afraid I do not understand your request. If you are requesting login credentials in order to place orders for Immobilizer or Radio codes, please note that you are not required to login. My records indicate that you are actively enrolled in the program, and are able to place orders as needed for future code adaptations. To do this, please simply follow these steps:

1. Access the Literature Portal that corresponds to the Make of the vehicle your would like a code for- either https://www.vw.techliterature.com or https://www.audi.techliterature.com

2. Click to "Enter Consumer Website"

3. In the "Keyword Search" field, enter "radiosupport" and click "Search"

4. Add the search result to your cart, and click next to complete the ordering process

Each order instance will cost $29.95 and is payable by credit card.

Please feel free to respond to this message if I have not addressed your inquiry, if you need further assistance, or with any further questions.

Best Regards,

Eddie

Volkswagen / Audi Technical Literature Ordering Center

vwgoa@arvatousa.com

From: vwemporium@aol.com [mailto:vwemporium@aol.com]
Sent: Tuesday, March 30, 2010 6:49 AM
To: Mailbox, Volkswagen, arvato digital services llc
Cc: Pugliese.Holly@epamail.epa.gov; techinfo@vw.com; Chris.White@mail.house.gov
Subject: Fwd: New VW and Audi Immobilizer Program GEKO ID request

Hello Arvato USA on behalf of VW-Audi of North America.

I require a username and password for GEKO and SVM to support the functions of my VAS 5052 Tester.

I have attached the correspondence from the EPA in regards to what is required.

I am already a GEKO user and have been on the PIN program from the start of it.

My tester # is registered with VW-Audi.

I am exempt from the 100USD fee for application as I am a life member.

Please provide detailed instructions and what is required if any other fees in order to expedite the process as VW has changed companies from Resolve Archway to you.

The process was detailed in July of 2009, was not active with the attributes changed for the NASTF with a dead end/ Documented.

The process with links from VW techinfo@vw.com were not active at time of e-mail sent below in 2009 of DEC./Documented.

I have been requesting a username and password for GEKO since 2008 Oct>

Regards,

Jack Shapiro

European Parts Emporium

1001 State Route 17K

Montgomery New York 12549 USA

NYS DMV Repair LIC # 7076062

845-457-9808 TEL

845-457-9461 FAX

vwemporium@aol.com

-----Original Message-----
From: Pugliese.Holly@epamail.epa.gov
To: vwemporium@aol.com
Cc: Chris.White@mail.house.gov
Sent: Thu, Jan 7, 2010 3:10 pm
Subject: Re: Fwd: update on EPA discussion with VW

Mr. Shaprio. Attached is a summary of EPA's finding regarding the VW issues that have been raised to us. In short, we do not believe that VW is in violation of EPA's service information regulations based on the the information we have been provided to date. Please read through this and if you have any questions or additional information you would like us to consider, please let me know.

Regards,

Holly Pugliese
US EPA

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Cc:	Chris.White@mail.house.gov
Date:	12/28/2009 01:53 PM
Subject:	Fwd: update on EPA discussion with VW

-----Original Message-----
From: VWoA Tech Info <TechInfo@vw.com>
To: 12Vdoc@gmail.com; 35jandj@optimum.net; aaforeign@hotmail.com; alan@bridgewatermotorworks.com; alex_locks@yahoo.com; animasautomotive@msn.com; arkco00368@yahoo.com; armand@gfautomobiles.com; autoimport1@sbcglobal.net; autolegend@comcast.net; autolox@comcast.net; autosafety@msn.com; autotech2go@gmail.com; autowerkes@roadrunner.com; autoy58@yahoo.com; avsauto@comcast.net; baydiagnostic@aol.com; Beachhouseimportsusa@yahoo.com; beetleclinic@rcn.com; Berrylocksmith@aol.com; bill@lock.com; bryan@rmotorcars.com; bryannystrom@msn.com; bsorkhe@aol.com; BtoB@roadrunner.com; bwbeetle@msn.com; chkengine@yahoo.com; colin@affinitiveauto.com; DaveLee@mgautowholesale.com; dg1brandt@kcnet.com; dlee7883@optonline.net; DrPeter@excite.com; dstrieder@msn.com; earl@huberauto.com; eddiedellz@yahoo.com; EQMain@euroquattro.com; estimates@alexsautohaus.com; europart@pacbell.net; eute321@aol.com; example7751@sbcglobal.net; fares2870@yahoo.com; geraragon@hotmail.com; germanca@isomedia.com; germanconcepts@comcast.net; globalautoelectric@gmail.com; gordon.rudolph@taeaudio.com; GSMWERK@YAHOO.com;

hessy@volxgerman.com; hillbros@pacbell.net; hitechautomotive@clearwire.net; Hvautoelectric@AOL.com; info@executiveautogallery.com; info@fairfieldcountymotorsport.com; info@hillsideimports.com; ingolstadtwest@yahoo.co.uk; iwaldman@comcast.net; jacob@mississaugaautocentre.ca; jbeckius@centreoftherockies.com; jennifer@vwerks.com; jjautobody@sbcglobal.net; jkautomotive@hotmail.com; JM2674@msn.com; josserman@SelectEuroCars.com; Jpmaui@optonline.net; keymanmike@juno.com; keystoneautoservice@pacbell.net; labarslockshop@comcast.net; lifetimesecurity@qwestoffice.net; lostcabin@mac.com; mark@mittlermotors.net; markcerv@aol.com; Matt@eurotechofholland.com; mbener@carmadillo.com; migeli@yahoo.com; millbrookimports@madriver.com; mpal6703@yahoo.com; murphyvw@earthlink.net; mygarageinc@msn.com; nicholsshop@ucom.net; oldwickvillage@earthlink.net; parkav13@hotmail.com; pat@pro-imports.com; pdqlockservice@aol.com; peggygagnon@verizon.net; philsautos@aol.com; plano@autoscopeltd.com; poojitha.dahanaike@servicesolutions.spx.com; premierauto@bellsouth.net; Purcell@qx.net; qicpic@bellsouth.net; r@ea-w.com; raulb@bellsouth.net; Richard.Harger@cox.com; richkstrotz@keithcoxautobahn.com; RPWerner@aol.com; rwittler@comcast.net; rwsie@clear.net; sales@bernhards.com; sevan@integritymotorcar.com; skiking1@hotmail.com; sloanavs@aol.com; smdiagnostics@optonline.net; steveb@atlantic.net; TC2869@msn.com; Teimc@verizon.net; theautoclinic@sbcglobal.net; thekidsgarage@hotmail.com; tonybranch33@juno.com; tramies@pvgarage.com; vwemporium@aol.com; vwhoward@wagenwerx.com; vwkoda09@aol.com; walter@universalimports.com; Werner.Huber@AUDI.DE; whiteknightlocks@aol.com; xgdon@hotmail.com; yinyang@earthlink.net; zamorasm@msn.com
Sent: Wed, Dec 2, 2009 10:03 am
Subject: New VW and Audi Immobilizer Program

To: All VW and Audi Registered Independent Repair Shops.

Subject: New Immobilizer Program

Effective Immediately Resolve / Archway will no longer be accepting Immobilizer Adaption requests.

Volkswagen and Audi has a new vendor for these services, Arvato. As a result the process has changed.

Obtaining an immobilizer adaptation requires access to a tester configured with a certificate for use with the GeKo system, a high speed internet connection and additional information identifying both the vehicle and workshop to maintain security. The adaptation is only valid for the vehicle it is being performed on at the time it is being performed. The certificate download to your e-mail address will occur within a half an hour of the adaptation request.

1. Registered workshops: request an immobilizer adaptation by purchasing on-line through:

www.vw.techliterature.com/consumer/home.aspx or

www.audi.techliterature.com/consumer/home.aspx

Open the web site and select “Consumer Portal”, Enter “Diagnostics” in the literature type. Do not fill in any of the other search categories.

2. When in the VW site, search for code VWIMMRADIOSUPPORT.

3. When in the Audi site, search for code AUIMMRADIOSUPPORT

- Immobilizer adaptation fee of $29.95 will apply for each adaptation ordered by the workshop.

4. Upon checkout, you will receive an acknowledgement email that the order is in process.

5. Arvato will call the independent shop to request the Vehicle VIN# and other important information.

- Hours of operation are 7AM to 5PM PST

6. Arvato Immobilizer Support immediately contacts VWGoA with an immobilizer adaptation and certificate download request

7. VWGoA calls the requesting registered workshop and completes the adaptation procedure.

- If the vehicle has been reported as stolen, no immobilizer adaptation will be given

For complete program details, please see the attached document.

Thank you

Volkswagen / Audi Immobilizer Support

<<Pre 2010 Immobilizer Service Program for Independent Workshops.pdf>>

-----Original Message-----
From: Pugliese.Holly <Pugliese.Holly@epamail.epa.gov>
To: vwemporium <vwemporium@aol.com>
Sent: Thu, Oct 14, 2010 9:27 am
Subject: Re: EMISSIONS FRAUD ! ATTENTION EPA

Hi Jack. Thanks for sending this. I have turned it over to our Enforcement Office.. They have brought cases against several other companies like this and I'm sure they will be interested in this one as well if they aren't already aware of it.

Holly A. Pugliese
US EPA
Office of Transportation and Air Quality
734.214.4288
pugliese.holly@epa.gov

From:	vwemporium@aol.com
To:	Holly Pugliese/AA/USEPA/US@EPA
Date:	10/12/2010 02:47 PM
Subject:	EMISSIONS FRAUD ! ATTENTION EPA

Hello Holly

Please tell these guys to stop selling this stuff. It is used for nothing other then circumventing an emission device.

http://store.42draftdesigns.com/O2-Sensor-Spacer_p_306.html

http://forums.vwvortex.com/showthread.php?5049214-P0420-on-2001-Jetta-1.8T&p=67944508#post67944508

If you could just drop someone like this a an email. I bet you could scare a difference :)

Flying back from NASTF and CARS meeting Vegas for Right to Repair Act meeting, so I was helping people fix there dirty cars via the long flight home.

Thank you again by the way with the help getting VW-Audi to sort of comply.

It seems they are being very difficult with releasing the required information to repair cars safe and clean.

Cheers.

Jack Shapiro

European Parts Emporium
1001 State Route 17K
Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL
845-457-9461 FAX

-----Original Message-----
From: vwemporium <vwemporium@aol.com>
To: mcdaniel.doug <mcdaniel.doug@epa.gov>
Sent: Sat, Jan 19, 2013 10:37 pm
Subject: Fwd: Some key points of interest EPA emission violations.

For your pleasure Doug,

Happy 2013

Jack Shapiro E.P.E.

VAS>Geko ASE Extern

7076062 NYS DMV

SAE>NASTF

European Parts Emporium

Immobilizer Solutions

1001 State Route 17K

Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL/FAX

845-784-0564 Net

-----Original Message-----
From: vwemporium <vwemporium@aol.com>
To: Pugliese.Holly <Pugliese.Holly@epamail.epa.gov>; vwemporium <vwemporium@aol.com>; Chris.White <Chris.White@mail.house.gov>
Sent: Sat, Jan 19, 2013 10:34 pm
Subject: Some key points of interest EPA emission violations.

Good Job, Holly,

Happy 2013!

http://www.epa.gov/enforcement/air/cases/edgeproducts.html

You may want to take a look a little over here.

One of the largest perpetrators of what I have to undo for VW-Audi-Porsche.

They hide behind the fact they are in Canada.

http://www.unitronic-chipped.com/

They make an appearance, in force,.... at a show called Waterfest, (a VW car show) in the USA Englishtown OLD BRIDGE TOWNSHIP NJ every year.

They make an extra effort, to make kids believe that deleting all the emission devices should be done, and offer the services to do so.

http://www.waterfest.net/

I bet if you did a walk through at this show, you could clean up a large portion of this, or at the very least, investigate it.

Simply put, I am tired of people coming in and saying "oh I wont fix my car I will just delete it because its cheaper".

It hurts my economy for repairs.

Just my two cents below.

It would be helpful if the EPA would dispatch a letter to all State DMV agencies.

That a clear of the fault memory should be performed at end of State DMV IM SMOG inspection, read VIA the OBD2 and then recheck the readiness status VIA the OBD2. It is my experience that cars such as the company above, set the Readiness bits to ready always. This would help fail cars that clearly have been modified and generate monies for fines etc.

Best,

Jack Shapiro E.P.E.

VAS>Geko ASE Extern

7076062 NYS DMV

SAE>NASTF

European Parts Emporium

Immobilizer Solutions

1001 State Route 17K

Montgomery New York 12549 USA

vwemporium@aol.com

845-457-9808 TEL/FAX

845-784-0564 Net

AO 440 (Rev. 12/09) Summons in a Civil Action

UNITED STATES DISTRICT COURT

for the

Southern District of New York

RTK Technologies Limited

Plaintiff

v.

Jack Shapiro

Defendant

Civil Action No. 15-CV-05157-KMK

SUMMONS IN A CIVIL ACTION

To: *(Defendant's name and address)* Jack Shapiro
1001 State Route 17K
Montgomery, New York 12549

A lawsuit has been filed against you.

Within 21 days after service of this summons on you (not counting the day you received it) — or 60 days if you are the United States or a United States agency, or an officer or employee of the United States described in Fed. R. Civ. P. 12 (a)(2) or (3) — you must serve on the plaintiff an answer to the attached complaint or a motion under Rule 12 of the Federal Rules of Civil Procedure. The answer or motion must be served on the plaintiff or plaintiff's attorney, whose name and address are:

Melissa A. Pena
Ami Bhatt
Norris, McLaughlin & Marcus, P.A.
875 Third Ave., 8th Floor
New York, New York 10022

If you fail to respond, judgment by default will be entered against you for the relief demanded in the complaint. You also must file your answer or motion with the court.

CLERK OF COURT

Date: _____

_____
Signature of Clerk or Deputy Clerk

Civil Action No.

PROOF OF SERVICE

(This section should not be filed with the court unless required by Fed. R. Civ. P. 4 (l))

This summons for *(name of individual and title, if any)* _____

was received by me on *(date)* _____ .

❒ I personally served the summons on the individual at *(place)* _____

_____ on *(date)* _____ ; or

❒ I left the summons at the individual's residence or usual place of abode with *(name)* _____

_____ , a person of suitable age and discretion who resides there,

on *(date)* _____ , and mailed a copy to the individual's last known address; or

❒ I served the summons on *(name of individual)* _____ , who is

designated by law to accept service of process on behalf of *(name of organization)* _____

_____ on *(date)* _____ ; or

❒ I returned the summons unexecuted because _____ ; or

❒ Other *(specify):*

.

My fees are $ _____ for travel and $ _____ for services, for a total of $ 0.00 .

I declare under penalty of perjury that this information is true.

Date: _____ _____

Server's signature

_____

Printed name and title

_____

Server's address

Additional information regarding attempted service, etc:

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

RTK TECHNOLOGIES LIMITED, Plaintiff, v. JACK SHAPIRO, Defendant.	Civil Action No. 15-cv-05157 (KMK) **AMENDED COMPLAINT** **DEMAND FOR JURY TRIAL**

Plaintiff, RTK Technologies Limited ("Plaintiff" or "RTK"), by and through its undersigned counsel, as and for its amended complaint against defendant, Jack Shapiro ("Defendant" or "Shapiro"), alleges as follows:

NATURE OF THE SUIT

1. This is an action for trademark infringement, commercial defamation and unfair competition under the United States Trademark ("Lanham") Act, as amended, and breach of a dealership agreement, unfair competition, defamation, and tortious interference with existing and prospective contract in violation of New York common law.

2. Although Plaintiff terminated its dealership arrangement with Defendant and Defendant acknowledges that he is a *former* dealer, Defendant continues to utilize Plaintiff's trademarks and sell Plaintiff's goods.

3. Plaintiff seeks to protect its REVO mark and variations thereof, which it has used for over the past decade in the United States in connection with the manufacturing, distribution and sale of its automotive software products.

4. Defendant has trespassed blatantly on Plaintiff's trademark rights by marketing and offering for sale similar goods and services under a designation identical to Plaintiff's marks.

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5. Despite Plaintiff's demands that Defendant cease infringing on its trademark rights and selling Plaintiff's goods, Defendant has continued to use and appropriate Plaintiff's marks and sell Plaintiff's goods.

6. In addition, after Plaintiff commenced this action, Defendant hasengaged in a campaign to defame Plaintiff in the market place by publishing false and misleading statements regarding Plaintiff and its product on his website and eBay. Defendant's misleading statements include that (i) Plaintiff is perpetrating a fraud on government agencies by tampering with emission devices; (ii) Plaintiff's intellectual property is "illegal;" (iii) Plaintiff commits acts of forgery; and (iv) Plaintiff defrauds customers and its dealer network. Upon information and belief, Defendant has also emailed to Plaintiff's dealer network these false statements and solicited them to provide him with Plaintiff's proprietary information, which would constitute a breach of their dealership agreements.

7. Plaintiff brings this action to put an end to Defendant's willful violation of its rights.

THE PARTIES

8. Plaintiff is a limited liability company organized under the laws of the United Kingdom, having a principal place of business of 37 Lanchester Way, Royal Oak Industrial Estate, Daventry, NN118PH, United Kingdom.

9. Upon information and belief, defendant Jack Shapiro is an individual residing in New York at 1001 State Route 17K, Montgomery, New York 12549. Mr. Shapiro also does business under the name European Parts Emporium.

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JURISDICTION AND VENUE

10. This Court has jurisdiction over this dispute pursuant to 15 U.S.C. § 1121, 28 U.S.C. § 1331 and 28 U.S.C. § 1338(a), as the counts pleaded herein arise under the United States Trademark (Lanham) Act of 1946, as amended, 15 U.S.C. §§ 1051-1127.

11. Subject matter jurisdiction in this Court over these causes of action is proper pursuant to Sections 39 and 44 of the Lanham Act, 15 U.S.C. § 1121 and 28 U.S.C. §§ 1331 and 1338, and pursuant to 28 U.S.C. § 1367, under a theory of supplemental jurisdiction.

12. This Court has personal jurisdiction over the Defendant as Defendant resides and conducts business in this district, and as Defendant has caused injury to Plaintiff in this judicial district.

13. Venue is proper in the Southern District of New York pursuant to 28 U.S.C. § 1391(b), as a substantial part of the events giving rise to the claims of this complaint occurred in this judicial district.

STATEMENT OF FACTS

PLAINTIFF'S TRADEMARK RIGHTS

14. Plaintiff RTK was founded in 2002 in Daventry, England. The company offers automotive aftermarket performance-enhancing products and services.

15. For over 10 years, since 2003, Plaintiff has manufactured, distributed, offered for sale, and sold its automotive software products under the REVO TECHNIK mark in the United States.

16. Since that time, Plaintiff has also manufactured, distributed, offered for sale, and sold its automotive software products under the REVO mark in the United States.

17. Plaintiff offers its goods and services in over forty (40) countries around the world, through a network of over 400 authorized dealers and performance centers internationally.

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18. In the United States specifically, Plaintiff's products are sold nationwide, through a network of dealers located in approximately 30 states.

19. Plaintiff owns the following U.S. trademark registration:

- Reg. No. 4,759,978 for the mark REVO, in Class 42 for computer software used to increase automotive fuel efficiency and engine performance.

20. Plaintiff also owns the following pending U.S. trademark applications:

- Serial No. 86/442,535 for the mark REVO TECHNIK, in Class 42 for computer software used to increase automotive fuel efficiency and engine performance.

Collectively, Plaintiff's trademarks are referred to as the "REVO Marks." A copy of the certificate of registration for the registered REVO Mark is attached hereto as **Exhibit A**.

21. In the past five years alone, Plaintiff has realized not less than 2 million dollars in sales for goods and services offered under the marks in the United States.

22. Indeed, Plaintiff is one of the leading providers of such goods and services in the United States.

23. Additionally, Plaintiff has spent significant sums of money to promote, advertise and market its REVO brand in the United States. Excerpts of Plaintiff's website, through which Plaintiff markets its goods in the United States, are attached hereto as **Exhibit B.**

24. The REVO Marks have become well-known to consumers throughout the United States as an indication of goods and services emanating from or authorized by a single source, namely Plaintiff, and thus have acquired distinctiveness and secondary meaning.

25. As a result of Plaintiff's sales of goods and services under the REVO designations, its extensive promotion of the REVO Marks, and its nationwide presence, the REVO Marks have become imbued with goodwill and renown, which is exclusively associated with Plaintiff.

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DEFENDANT'S INFRINGEMENT OF PLAINTIFF'S TRADEMARK RIGHTS

26. Defendant has engaged in activities designed to trade off the reputation and goodwill earned by Plaintiff in its REVO Marks.

27. As noted, Plaintiff's products and services are distributed through a network of dealers and performance centers.

28. Defendant is a former dealer of Plaintiff.

29. On or about April 7, 2003, Defendant signed an agreement with Revo Technik America, LLC (the "Dealer Agreement"). A true and complete copy of the Dealer Agreement, dated April 7, 2003, is attached hereto as **Exhibit C**.

30. In his capacity as a dealer for Plaintiff, Defendant sold Plaintiff's software and related products to consumers, including installing and providing support for Plaintiff's software products sold under the REVO Marks on consumer's vehicles.

31. Under the terms of the parties' agreement, any and all intellectual property rights, including rights in the REVO Marks, remain the property of Plaintiff.

32. Specifically, Paragraph 2.2 of the Dealer Agreement set forth the following:

> **Ownership of Intellectual Property Rights**.
>
> All patents, trademarks, trade names, Trade Secrets, know-how, logos, derivatives, copyrights, copyrightable material, Software System, hardware, instruction manuals, code, chips and other designations used or adopted by REVO in connection with the manufacturing, selling or distribution of the REVO Software including, without limitation, the REVO marks and original content (collectively the "Rights") shall at all times be and remain the exclusive property of REVO. Nothing contained in this Agreement shall be construed to give New Company any ownership of or interest in the Rights or shall enable New Company to use the Rights after the expiration or termination of this Agreement. Any and all trademarks, copyrights, or other Rights which may exist or hereafter come into being, including without limitation, brand names subbrand names, or slogans, and which are used on labeling, packaging, advertising or promotional material for REVO Software shall be the exclusive property of REVO and shall be deemed included among the Rights. To the extent any other rights in or to any

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> trademarks, copyrights or other intellectual property associated or related to REVO Software or the marketing, sale or distribution thereof are deemed to accrue to New Company, New Company hereby agrees to assign any and all such rights to REVO at such time as they are deemed to accrue.

See Exhibit B at ¶ 2.2.

33. Under the terms of the Dealer Agreement, Defendant also acknowledged that the REVO Marks belong to Plaintiff, as pursuant to Paragraph 3.2 of the Dealer Agreement, the parties agreed as follows:

> **Rights to the Marks**
>
> Nothing in this Agreement will create in New Company any rights in the REVO Marks (except the right to use such marks in accordance with this Agreement). New Company shall not use the REVO name or any abbreviation, contraction or simulation thereof or of REVO affiliated companies without REVO's prior written consent other than as expressly provided for in this Agreement.

See Id. at ¶ 3.2.

34. In addition, Defendant further agreed that it "shall not file during the Term [of the Dealer Agreement] or thereafter, any application for trademark or service mark registration or otherwise obtain or attempt to obtain ownership of any trademark, service mark or trade name with consist of a REVO mark or any REVO mark design, logo or slogan." Id. at ¶ 2.3.

35. Further, the Dealer Agreement provided that upon termination of the dealership arrangement, the dealer and his New Company shall discontinue use of the REVO Marks and any other REVO trade names or trademarks. Id. at ¶ 4.3.

36. Moreover, upon termination, the dealer must return all unused goods and materials, REVO's proprietary Serial Port Programming cable (the "SPP Cable"), service manuals, and other REVO materials to Plaintiff. Id.

37. The Dealer Agreement was renewed on or about November 23, 2005 by and between Shapiro and Revo Developments, Limited, the successor to Revo Technik America,

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LLC (the "Renewal Agreement" and together with the Dealer Agreement, "Agreements"). A true and complete copy of the signature page of the Renewal Agreement, executed by Defendant on or about November 23, 2005, is attached hereto as **Exhibit D**. Plaintiff has succeeded to Revo Developments, Limited's rights in the Agreements.

38. The term of the Renewal Agreement was for one year and automatically renewed for one year terms unless otherwise terminated.

39. The terms of the Renewal Agreement carried forward Defendant's acknowledgment of Plaintiff's rights in its REVO Marks.

40. In addition, it also set forth that upon termination of the dealership arrangement, the dealer must return all unused goods, the SPP Cable, and other materials within 5 days of termination.

41. On or about December 4, 2013, Plaintiff terminated the dealership agreement with Defendant.

42. At the time it terminated the Agreements, Plaintiff demanded that Defendant return the SPP Cable and other materials as provided for under the Agreements. Defendant failed to comply with such demand.

43. Despite having been terminated as a dealer of Plaintiff, Defendant also continued to advertise and promote himself as "an authorized Revo Technik Dealer."

44. In addition, though he no longer has Plaintiff's permission to do so, Defendant continues to advertise and display Plaintiff's REVO Marks and Plaintiff's products and services on his website, www.europeanpartsemporium.com.

45. Further, notwithstanding his knowledge of Plaintiff's rights in the REVO Marks, on January 21, 2014, Defendant filed an application with the U.S. Trademark Office to register

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the trademark REVO TECHNIK USA (the "Infringing Mark"), U.S. Trademark Application Serial No. 86/170,954 for "[d]ocument data transfer from one computer format to another; document data transfer from one computer to another; computer services, namely, data recovery services; computer services, namely, providing encrypted data recovery services" in Class 42 (the "Application"). A true and complete copy of Defendant's Application for the Infringing Mark, filed January 21, 2014, is attached hereto as **Exhibit E**.

46. Though Defendant described the relevant goods and services using differing terminology in the Application, upon information and belief, such goods and services clearly refer to goods and services identical to, related to, or highly similar to those offered by Plaintiff, and therefore the Application sought to register a mark that is identical to or highly related to Plaintiff's REVO Marks.

47. Prompted by the discovery of Defendant's Application for the Infringing Mark, and in view of Plaintiff's prior rights, in July 2014, counsel for Plaintiff demanded that Defendant withdraw the Application for the Infringing Mark. In addition, Plaintiff demanded that Defendant cease from displaying the REVO Marks and otherwise associating himself with Plaintiff on his website. A true and complete copy of Plaintiff's July 28, 2014 correspondence is attached hereto as **Exhibit F**.

48. Plaintiff also reiterated its demands that Shapiro return the SPP Cable and any unused goods and materials to Plaintiff. *See id.*

49. In response to Plaintiff's July 28th correspondence, Shapiro asserted that he had returned the SPP Cable (without which he is unable to sell Plaintiff's goods or continue to act as a dealer) to Plaintiff on or about October 19, 2012. However, the cable returned by Defendant was an old version of the cable. Subsequent to the return of such cable, on or about October 22,

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2012, Plaintiff issued Defendant a new SPP cable, which upon information and belief Defendant has not returned.

50. Upon information and belief, Defendant is still in possession of the SPP cable that was issued on or about October 22, 2012 given that Defendant continues to sell Plaintiff's goods, which, upon information and belief, he cannot sell without use of the SPP Cable as the cable is necessary to service and install Plaintiff's software. Thus, Defendant's continued selling of Plaintiff's goods belies his assertion that he has returned all of Plaintiff's SPP cables.

51. Despite further correspondence from Plaintiff demanding that Shapiro cease his infringing acts, Shapiro failed to comply with any of Plaintiff's demands, including the demand to withdraw the Application to register the Infringing Mark.

52. On November 3, 2014, Plaintiff filed its own applications to register the REVO Marks and was forced to file a Notice of Opposition with the U.S. Trademark Office, Trademark Trial and Appeal Board ("TTAB"), opposing Defendant's Application for the Infringing Mark. A true and complete copy of the Notice of Opposition, filed on November 4, 2014 with the TTAB, is attached hereto as **Exhibit G**.

53. Shapiro failed to file an answer or otherwise respond to Plaintiff's Notice of Opposition within his time to do so.

54. Accordingly, on January 16, 2015, the TTAB issued an Order to Show Cause and Notice of Default, providing Shapiro thirty (30) days from the date of the notice to show why a judgment of default should not be entered against him. A true and complete copy of the Order to Show Cause, dated January 16, 2015, is attached hereto as **Exhibit H**.

55. Following Shapiro's default and the issuance of the Board's Order to Show Cause, by way of a correspondence dated January 19, 2015, Plaintiff reiterated its demands that

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[illegible] activities. A true and complete copy of Plaintiff's January 19, 2015 correspondence is attached hereto as **Exhibit I**.

56. In or around January 28, 2015, Shapiro acknowledged that Plaintiff terminated the dealership agreement. He removed references to himself as "an authorized Revo Technik Dealer," from his website and clarified that he is a former dealer for Plaintiff. Despite his acknowledgment that he is a former dealer of Plaintiff, Shapiro did not cease utilizing the REVO Marks or selling Plaintiff's goods. Indeed, on his website, Defendant states that he will continue to sell new versions of Plaintiff's goods despite being terminated as a dealer for Plaintiff. Excerpts of Defendant's website, www.europeanpartsemporium.com, wherein he wrongfully continues to advertise and display the REVO Marks are attached hereto as **Exhibit J**.

57. On February 28, 2015, judgment was entered by the TTAB on Defendant's Application against Defendant and in favor of Plaintiff. A true and complete copy of the TTAB's February 28, 2015 Judgment is attached hereto as **Exhibit K**.

58. Shapiro however continues to sell and promote REVO branded products and advertise and display Plaintiff's REVO Marks on his website.

59. Shapiro also has refused to return the SPP Cable and any unused REVO goods or materials.

60. Further, Shapiro is continuing to sell and promote REVO branded products on an eBay store under the name "vwemporium128a." True copies of images from Shapiro's eBay store, where he sells and features REVO branded products and continues to advertise and display the REVO Marks, are attached hereto as **Exhibit L**.

61. Moreover, to promote his company, European Parts Emporium, Shapiro continues to use paraphernalia and marketing materials that bear the REVO Marks, including but not

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[illegible] the REVO Marks on his business cards, as well as continues to distribute [illegible] that associate his business with that of the Plaintiff.

62. In addition, despite being denied registration for the Infringing Mark, Revo [illegible] and despite Plaintiff's clear prior rights in the REVO Marks, Defendant continues [illegible] the Infringing Mark.

63. Defendant has purchased and owns the domain name www.revotechnikusa.com (the "Infringing Domain"), which website redirects consumers to his European Parts Emporium website. Upon information and belief, Defendant registered this domain in bad faith and with the specific intent of diverting consumers from Plaintiff's website.

64. Plaintiff also learned that Shapiro is selling and promoting REVO branded products on a second eBay store under the name "revo_technik_usa," a name confusingly similar, and indeed nearly identical to the REVO Marks. True copies of images from Shapiro's eBay store, under the member name "revo_technik_usa," which sells and features REVO branded products and advertises and display the REVO Marks, are attached hereto as **Exhibit M**.

65. Further, upon information and belief, in order to sell the types of the Plaintiff's goods available for purchase on Defendant's "revo_technik_usa" eBay store, Defendant must be in possession of Plaintiff's SPP Cable. Accordingly, upon information and belief, Defendant has retained Plaintiff's SPP Cable.

66. In addition, despite demands from Plaintiff that Defendant cease his continued use of the REVO Marks and of the Infringing Mark, REVO TECHNIK USA, Defendant has refused and persists in his infringing activities.

67. Defendant's Infringing Mark is identical, or nearly identical, to Plaintiff's REVO Marks.

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68. Given the identical nature of the Infringing Mark and the REVO Marks, Defendant's use of the Infringing Mark is likely to cause confusion in the marketplace as to the origination, association, sponsorship or endorsement of Defendant and/or its goods and services' sold under the Infringing Mark by or with Plaintiff and/or its goods and services sold under the REVO Marks.

69. Further, as a result of Defendant's role as a former dealer of Plaintiff, Defendant had constructive notice, since long prior to the commencement of Defendant's unlawful actions described herein, of Plaintiff's exclusive ownership of the REVO Marks.

70. In addition, Plaintiff no longer has an association, affiliation, sponsorship or any other connection to the Defendant. Nonetheless, Defendant continues to use the REVO Marks on his website. Consequently, Defendant's wrongful actions are likely to mislead consumers into believing that Plaintiff and Defendant are affiliated when they are not.

71. Defendant's wrongful actions are likely to divert and appropriate the goodwill created by Plaintiff in its REVO Marks.

72. Upon information and belief, Defendant is willfully and in bad faith attempting to exploit the goodwill and fame of the REVO Marks. Defendant's infringing use of the REVO Marks on his website and eBay stores, and his use of the Infringing Mark has the effect of injuring Plaintiff by deceiving, misleading, and confusing Plaintiff's customers and the public in general as to whether Plaintiff is the source, sponsor, or otherwise associated with Defendant and the goods and services intended to be sold under the Infringing Mark.

DEFENDANT'S FALSE AND MISLEADING STATEMENTS

73. Subsequent to Plaintiff's commencement of this action, Defendant has engaged in a campaign to defame and disparage Plaintiff and its products.

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74. On or about July 16, 2015, Defendant published on his website malicious, defamatory and disparaging comments concerning Plaintiff and its products. On his website, Defendant stated that (a) Plaintiff's products are "illegal;" (b) Plaintiff defrauds government agencies by taking steps to circumvent emission testing; and (c) Plaintiff displays false statements on its website regarding its products. Specifically, Defendant's website contained the following disparaging statements: that Plaintiff engages in a "criminal enterprise for programming cars driven on public roads . . . by deceiving Federal/State Government SMOG Emission agencies, Insurance companies, deceit or even you the customer by their documented lies . . ." Defendant went on to state that Plaintiff lies to its customers and "will forge anything they choose to suit their illegal business model, stating, more lies at any given time." A true and complete copy of an excerpt of Defendant's website page containing such malicious, defamatory and disparaging comments is attached hereto as **Exhibit N**.

75. Such malicious, defamatory and disparaging comments are accessible to consumers via Defendant's website, www.europeanpartsemporium.com, as well as through the Infringing Domain, www.revotechnikusa.com, which domain incorporates terms confusingly similar to Plaintiff's REVO Marks and which redirects to Defendant's www.europeanpartsemporium.com domain.

76. Similarly, Defendant has posted nearly identical malicious, defamatory and disparaging statements on the eBay website wherein he sells Plaintiff's products. A true and complete copy of an excerpt of Defendant's eBay store is attached hereto as **Exhibit O**. In addition to publishing such false statements on the eBay website, Defendant also solicits "REVO TECHNIK DEALERS" to breach their own dealership agreements with Plaintiff. He requests that the dealers provide him with Plaintiff's proprietary information, including credits for SPP

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cables (which cables are required to purchase and sell Plaintiff's software products), Plaintiff's internal documents and encrypted files.

77. In addition, on July 15, 2015, Defendant sent an email to Plaintiff's dealers directly soliciting them to turn over Plaintiff's proprietary information. The email also contained a link to Defendant's website which contained the malicious, defamatory and disparaging statements referenced above. In such email, Defendant also asked Plaintiff's dealers, the following question: "Ever suspect that a sale was undermined and sent directly to Revo circumventing you?" Upon information and belief, this question was posed to cause dealers to believe that Plaintiff is deflecting customer sales from its dealer network and retaining the sales for itself. Defendant went on to state to Plaintiff's dealers that Plaintiff is "bilking" them. Upon information and belief, the July 15, 2015 email went to REVO's entire dealer network as well as other third parties in the automobile industry.

78. Upon information and belief, Defendant has also posted disparaging comments concerning Plaintiff, consistent with the above-referenced statements, on various online automobile forums. Upon information and belief, on or about August 5, 2015, Defendant initiated a discussion thread on the forum VWVortex.com, under the username "OVER_Technik_USA" and falsely stated that Plaintiff was under investigation by the Environmental Protection Agency. A true and complete copy of this thread from the website VWVortex.com is attached hereto as **Exhibit P.**

79. Defendant's statements concerning Plaintiff, its products, and its business are false.

80. With respect to Defendant's statement that Plaintiff is defrauding government agencies by modifying its product to circumvent emission tests, Defendant has full knowledge

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that this is false statement. Being in the industry, Defendant is fully aware that if Plaintiff tampered with the product to circumvent emissions tests, *any* modification would cause the vehicle to actually fail the test.

81. Nonetheless, Defendant knowingly published these false and misleading commercial statements in order to create the false and misleading impression that Plaintiff is engaging in illegal activity and defrauding its dealer network.

82. Indeed, Defendant's knowledge that these statements are false is betrayed by the fact that, notwithstanding his disparaging allegations concerning Plaintiff and its products, he continues to advertise, market, and sell REVO branded products.

83. Further, in making the aforementioned statements, the Defendant's malice and intent to harm Plaintiff's business reputation is demonstrated by the fact that he has also adopted the designation, as seen on both his website and eBay stores, "OVER Technik" – which is merely REVO spelled backwards. On the eBay website, he further mocks Plaintiff and states "Welcome to the World of OVER Technik!" That Defendant's conduct is malicious and directed to harm Plaintiff, a UK company, is further evidenced by the final sentence on his website – "As they say in the UK . . . . . Cheers a[**]hole!" See Exhibit N.

84. As a result of Defendant's false, malicious, defamatory, and disparaging statements about Plaintiff on his website, the eBay website, and via email to Plaintiff's dealers, Defendant has caused substantial injury to Plaintiff's business reputation and goodwill.

COUNT I
VIOLATIONS OF THE U.S. LANHAM ACT
(Trademark Infringement, False Designation of Origin and Unfair Competition Under 15 U.S.C. §§ 1114(1), 1125(a))

85. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

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86. Plaintiff has long standing rights in the REVO Marks, which marks are inherently distinctive to the public.

87. Plaintiff owns a U.S. Trademark Registration for the REVO Marks.

88. The REVO Marks have become well-known to consumers throughout the United States as an indication of goods and services emanating from or authorized by a single source, namely Plaintiff, and thus have acquired distinctiveness and secondary meaning.

89. Defendant's distribution, advertisement, offering for sale, and sale of goods and services under the Infringing Mark is likely to cause confusion, to cause mistake, or to deceive in violation of Section 32(1) of the Lanham Act, 15 U.S.C. § 1114(1), and Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

90. In addition, Defendant's use and promotion of Plaintiff's REVO Marks in commerce constitutes infringement of Plaintiff's REVO Marks in violation of Section 32(1) of the Lanham Act, 15 U.S.C. § 1114(1), and Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

91. Defendant's wrongful conduct also creates a false designation of origin and a false representation of Plaintiff's goods and services in violation of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a). Defendant's acts intend to suggest and has falsely suggested that Defendant's goods and services are endorsed, sponsored, authorized, or approved by Plaintiff in a manner to mislead consumers.

92. Defendant's acts described herein infringe Plaintiff's Marks, injure Plaintiff's business, reputation, and goodwill, and unless restrained and enjoined, will continue to do so, causing Plaintiff irreparable harm.

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93. Defendant's acts of trademark infringement have irreparably harmed and, if not enjoined, will continue to irreparably harm the general public, who has an interest in being free from confusion, mistake, and deception.

94. By reason of Defendant's acts of trademark infringement, Plaintiff's remedy at law is not adequate to compensate it for the injuries inflicted by Defendants. Accordingly, Plaintiff is entitled to injunctive relief pursuant to 15 U.S.C. § 1116.

95. Defendant's acts of trademark infringement are willful and Plaintiff is entitled to damages, and that those damages be trebled under 15 U.S.C. § 1117.

96. The foregoing acts of infringement have been and continue to be deliberate, willful and wanton, making this an exceptional case within the meaning of 15 U.S.C. § 1117 and entitling Plaintiff to an award of attorney's fees.

COUNT II
VIOLATIONS OF THE U.S. LANHAM ACT
(False Advertising, Commercial Defamation and Unfair Competition Under 15 U.S.C. § 1125(a))

97. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

98. Defendant's conduct, described herein, constitutes false advertising, product disparagement and unfair competition in violation of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

99. Defendant's commercial statements, made through and in the context of interstate commerce, to customers and dealers that Plaintiff is perpetrating a fraud against government agencies by circumventing emission devices; utilizing "illegal" intellectual property; committing acts of forgery; and defrauding its customers and dealer network; are all false statements. In addition, Defendant's statement that Plaintiff is "bilking" its dealers creates the false and

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misleading impression that Plaintiff is undermining its dealer network and is seeking to divert customers away from them.

100. Defendant's false and misleading statements, described above, have misled and have the tendency to mislead and deceive Plaintiff's dealers and customers concerning Plaintiff and its products.

101. Defendant's false and misleading statements are material because they are likely to affect consumers' decisions to purchase Plaintiff's product as well as dealers' decisions to conduct business with Plaintiff.

102. Defendant's false and misleading statements are willful and reckless because Defendant knew or should have known that the statements made were false, and they were intended to deceive, mislead and confuse the parties reading the statements about the manner in which Plaintiff operates its business and the nature of Plaintiff's products.

103. Plaintiff has suffered irreparably injury to its goodwill and reputation as a direct and proximate result of Defendant's false and misleading statements and violations of the Lanham Act.

104. Each of Defendant's separate violations of the Lanham Act, as alleged herein, in combination with one or more of the other violations, also constitutes, in combination, separate aggregate violations of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

105. Defendant's conduct in this respect is continuing and will continue unless restrained by the Court. Unless Defendant is enjoined from engaging in its wrongful conduct, Plaintiff will continue to suffer irreparable injury and harm.

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misleading impression that Plaintiff is undermining its dealer network and is seeking to divert customers away from them.

100. Defendant's false and misleading statements, described above, have misled and have the tendency to mislead and deceive Plaintiff's dealers and customers concerning Plaintiff and its products.

101. Defendant's false and misleading statements are material because they are likely to affect consumers' decisions to purchase Plaintiff's product as well as dealers' decisions to conduct business with Plaintiff.

102. Defendant's false and misleading statements are willful and reckless because Defendant knew or should have known that the statements made were false, and they were intended to deceive, mislead and confuse the parties reading the statements about the manner in which Plaintiff operates its business and the nature of Plaintiff's products.

103. Plaintiff has suffered irreparably injury to its goodwill and reputation as a direct and proximate result of Defendant's false and misleading statements and violations of the Lanham Act.

104. Each of Defendant's separate violations of the Lanham Act, as alleged herein, in combination with one or more of the other violations, also constitutes, in combination, separate aggregate violations of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

105. Defendant's conduct in this respect is continuing and will continue unless restrained by the Court. Unless Defendant is enjoined from engaging in its wrongful conduct, Plaintiff will continue to suffer irreparable injury and harm.

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COUNT III
VIOLATION OF THE ANTICYBERSQUATTING CONSUMER PROTECTION ACT
(15 U.S.C. § 1125(d))

106. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

107. Upon information and belief, Defendant is the owner of the Infringing Domain, www.revotechnikusa.com.

108. Defendant registered and used the Infringing Domain in bad faith and with the specific intent of diverting consumers from Plaintiff's website, unlawfully profiting from use of Plaintiff's REVO Marks, causing harm to Plaintiff and its brand, and creating a likelihood of confusion as to source, sponsorship, affiliation, or endorsement of Defendant by Plaintiff.

109. Defendant actions constitute a violation of the Anticybersquatting Consumer Protection Act, 15 U.S.C. § 1125(d) (the "ACPA").

110. Defendant's unauthorized registration and use of the Infringing Domain have caused and unless enjoined, will continue to cause, irreparable injury to Plaintiff and to the goodwill associated with the REVO Marks.

111. As Defendant's actions constitute a violation of the ACPA, Plaintiff is entitled to an order from this Court directing the Registrar of said domain to transfer the ownership of the Infringing Domain to Plaintiff and an award of damages to be determined at trial as well as attorneys' fees, costs and disbursements.

COUNT IV
COMMON LAW TRADEMARK INFRINGEMENT
(N.Y. Gen. Bus. Law § 360)

112. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

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113. Plaintiff is the owner of the common law rights in the REVO Marks, including in the mark REVO TECHNIK. Plaintiff's REVO Marks are well known, distinctive and recognized as denoting high-quality goods and services to the purchasing public throughout the United States.

114. Due to such reputation and public awareness, Plaintiff has established valuable good will in connection with REVO Marks.

115. Defendant's unauthorized adoption and use of the Infringing Mark, which is identical or nearly identical to Plaintiff's REVO Marks, and Defendant's wrongful use and appropriation of Plaintiff's REVO Marks in New York is likely to cause confusion or mistake and has and will deceive the public into associating Defendant's goods and services with those of Plaintiff.

116. These acts constitute common law service mark infringement for which Plaintiff has no adequate remedy at law.

117. Upon information and belief, Defendant committed the above alleged acts willfully, in bad faith, and in conscious disregard of Plaintiff's rights, and Plaintiff is therefore entitled to exemplary and punitive damages pursuant to the common law of the State of New York in an amount sufficient to punish, deter and make an example of Defendants.

118. By the acts described above, Defendants have engaged in trademark infringement in violation of the common law of the State of New York.

119. Defendant's acts have caused, and will continue to cause, irreparable injury to Plaintiff for which Plaintiff has no adequate remedy at law.

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COUNT V
DEFAMATION IN VIOLATION OF NEW YORK COMMON LAW

120. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

121. Defendant published false and defamatory statements about Plaintiff, its products, and business practices on his website, on the eBay website and through emails to dealers within Plaintiff's dealer network.

122. Through such statements, Defendant falsely asserts, *inter alia*, that Plaintiff engages in conduct to defraud government agencies by circumventing emissions devices; Plaintiff defrauds its customers and dealers; Plaintiff commits forgery and Plaintiff diverts customers from its dealer network.

123. Defendant knew the statements concerning Plaintiff were false and defamatory when he published it to others, or Defendant published such statements with reckless or wanton disregard as to whether such statements are true or false.

124. Defendant's statements are defamatory *per se* as they impute fraud and misconduct to Plaintiff thereby causing significant harm to Plaintiff's trade and business reputation, diminishing Plaintiff's goodwill, and subjecting Plaintiff to contempt, ridicule, aversion, ostracism, degradation or disgrace.

125. As a result of Defendant's conduct, Plaintiff has been greatly injured and damaged in an amount to be determined at trial.

126. Defendant's conduct is continuing and will continue unless restrained by the Court. Unless Defendant is enjoined from engaging in wrongful conduct, Defendant will continue to suffer irreparable injury and harm.

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COUNT VI
UNFAIR COMPETITION IN VIOLATION OF NEW YORK COMMON LAW
(N.Y. Gen. Bus. Law § 349(a))

127. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

128. The adoption and use by Defendant in New York of the Infringing Mark, and unauthorized use and display of Plaintiff's REVO Marks constitutes unlawful appropriation of Plaintiff's exclusive rights in and to its REVO Marks.

129. Through such acts, Defendant improperly trades upon Plantiff's goodwill and valuable rights in and to the REVO Marks.

130. In addition, Defendant's false and misleading statements and other wrongful conduct, described herein, constitute unfair competition in violation of New York common law.

131. Defendant's false and misleading statements have misled and have the tendency to mislead Plaintiff's customers and dealer network.

132. Defendant's false and misleading statements, described herein, constitute willful and deliberate efforts to cause (i) customers to refrain from purchasing Plaintiff's product; or (ii) Plaintiff's dealers to refrain from continuing to do business with Plaintiff.

133. Defendant's unauthorized use of the REVO Marks and misleading statements have caused and is causing damage and irreparable injury to Plaintiff.

134. The foregoing acts by Defendant constitute unfair competition and infringement of Plaintiffs common law rights for which Plaintiff has no adequate remedy at law.

COUNT VII
BREACH OF CONTRACT

135. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

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136. Plaintiff succeeded to Revo Developments, Limited's rights under the Agreements.

137. Under the terms of the Agreements, Defendant acknowledged Plaintiff's rights in and ownership of the REVO Marks.

138. Further, the terms of the Agreements set forth that upon termination of the dealership relationship, Defendant was to return or make available for return Plaintiff's proprietary SPP Cable as well as unused REVO materials or goods.

139. Upon termination of the agreement, Plaintiff demanded that Defendant return the SPP Cable and the unused materials.

140. Defendant, however, failed and has refused to comply with such demand

141. Moreover, despite acknowledging Plaintiff's rights in the REVO Marks, and though he is no longer authorized to do so, Defendant continues to use the Infringing Mark and continues to sell and promote REVO branded products and advertise and display Plaintiff's REVO Marks on his website and on his eBay stores.

142. As a result of Defendant's material breaches of the Agreements, Plaintiff has suffered damages in an amount to be determined at trial.

COUNT VIII
TORTIOUS INTERFERENCE WITH CONTRACT IN VIOLATION OF NEW YORK COMMON LAW

143. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

144. Defendant's statements, described herein, are knowingly false and defamatory statements about Plaintiff, Plaintiff's business and its products.

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145. Defendant's knowingly false, misleading and disparaging statements are causing its dealers to believe that Plaintiff is engaged in a scheme to defraud government agencies and/or that Plaintiff is currently subject to a government investigation and/or that Plaintiff defrauds its dealer network.

146. Defendant statements are made with the unjustifiable intention of harming Plaintiff and its relationship with its existing dealers and to cause injury to Plaintiff's goodwill, reputation and business.

147. Defendant has also solicited Plaintiff's dealers to breach their dealership agreements with Plaintiff by providing Defendant with proprietary information and equipment belonging to Plaintiff.

148. Defendant is well aware that Plaintiff operates through a network of dealers in the United States and that such dealers have entered into valid and subsisting dealer agreements with Plaintiff.

149. Defendant has intentionally and unjustifiably interfered with the business relationships between Plaintiff and its dealers by making knowingly false and misleading statements regarding Plaintiff and its product to induce Plaintiff's dealers to breach their dealer agreement with Plaintiff, including but not limited to, by providing Defendant with proprietary materials belonging to Plaintiff.

150. Defendant has and continues to cause Plaintiff damage, including irreparable injury to Plaintiff's business relationships with its dealers, as well as Plaintiff's good will and reputation.

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COUNT IX
TORTIOUS INTERFERENCE WITH PROSPECTIVE ECONOMIC ADVANTAGE IN VIOLATION OF NEW YORK COMMON LAW

151. Plaintiff repeats and realleges each of the allegations contained in the preceding paragraphs as though more specifically set forth at length herein.

152. Defendant's statements, described herein, are knowingly false and defamatory statements about Plaintiff, Plaintiff's business and its products.

153. Defendant has intentionally and maliciously made such false statements to cause injury to Plaintiff and to Plaintiff's goodwill, reputation and business.

154. Defendant's knowingly false, misleading and disparaging statements are causing dealers and/or customers to believe that Plaintiff is engaged in a scheme to defraud government agencies and/or that Plaintiff is currently subject to a government investigation and/or that Plaintiff defrauds its dealer network.

155. Defendant is well aware that Plaintiff operates through a network of dealers in the United States and Plaintiff intends to further develop this network with other dealers in the automotive industry as well as obtain new customers.

156. Defendant has intentionally and unjustifiably interfered with the business relationships between Plaintiff and those parties by making knowingly false and misleading statements regarding Plaintiff and its product.

157. Defendant has and continues to cause Plaintiff damage, including irreparable injury to Plaintiff's business relationships with its dealers and customers, as well as Plaintiff's good will and reputation.

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PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court:

A. Enter judgment in favor of Plaintiff and against Defendant on Plaintiff's causes of action stated herein;

B. Grant Plaintiff a permanent injunction enjoining Defendant and its officers, agents, servants, employees, attorneys and all other persons in active concert or participation with any of them, from:

1. Directly or indirectly infringing Plaintiff's trademarks in any manner, including but not limited to the provision, advertising, selling, or offering for sale any services that infringe Plaintiff's trademarks or trade dress; and

2. Using the REVO Marks or any reproduction, counterfeit, copy, or colorable imitation of such mark in connection with the provision, advertising, marketing, sale, offering for sale, or other use of any good or service, including on any website owned or controlled by Defendant, including but not limited to the website, www.europeanpartsemporium.com; and

3. Using any word, term, name, symbol, or device, or any combination thereof, or using any false designation of origin, false, or misleading description of fact, or false or misleading representation of fact, which is likely to cause confusion, or to cause mistake or to deceive as to the affiliation, connection, or association of Defendant with Plaintiff or as to the origin, sponsorship, or approval of a Defendant's services by Plaintiff;

4. Engaging in any other activity constituting unfair competition with Plaintiff or constituting an infringement of the REVO Marks;

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5. Making any false, misleading, slanderous, defamatory, or disparaging statements or engaging in false, misleading or unfair trade practices or tortious interference with business relationships, including, without limitation, stating, claiming, suggesting, intimating or implying in any manner whatsoever that Plaintiff is seeking to defraud federal and government agencies by tampering with smog detectors, that Plaintiff has made fraudulent statements to its dealers and/or customers, committed forgery or diverted customers from its dealer network;

6. Making any other false, misleading, slanderous, disparaging or defamatory statements about Plaintiff or Plaintiff's products; and

7. Otherwise engaging in acts, either directly or through other entities, of product disparagement, slander, unfair and deceptive trade practices, unfair competition, or tortious interference with actual or prospective business relations.

B. Enter an order requiring Defendant to immediately place a corrective statement in a form, frequency, manner and publications that are acceptable to Plaintiff and the Court that expressly notifies the public that Plaintiff's does not defraud government agencies, its customers or dealers.

C. Enter an order compelling Defendant to return Plaintiff's proprietary materials, including the SPP Cable;

D. Enter an award directing the Registrar of the Infringing Domain to transfer the ownership of the Infringing Domain to Plaintiff;

E. Enter an award permanently enjoining Defendant, anyone active in concert with or in participation therewith, from registering any domain name with consists of any slogan, name, or mark confusingly similar to the REVO Marks;

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F. Enter judgment awarding Plaintiff compensatory damages, including lost profits;

G. Order an accounting of Defendant's profits realized in connection with the sale of any infringing products or on account of any false association with Plaintiff and false advertising, and an award in such amount to Plaintiff;

H. Grant an award to Plaintiff of exemplary damages;

I. Order recovery of compensatory punitive damages for Defendant's willful and malicious actions;

J. Grant of an award of attorneys' fees under the Lanham Act, 15 U.S.C. § 1117; and

K. Such other and further relief as the Court may deem just and necessary.

JURY DEMAND

Pursuant to Fed. R. Civ. P. 38(b), plaintiff hereby demands a trial by jury on all issues so triable herein.

Dated: August 13, 2015

Respectfully submitted,

/s/ *Melissa A. Pena*

Melissa A. Peña, Esq.
Ami Bhatt, Esq.
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875 Third Avenue, 8th Floor
New York, New York 10022
Phone: 212-808-0700

Attorneys for Plaintiff,
RTK Technologies Limited

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To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Huffman, Linda
Sent: Fri 9/18/2015 8:37:28 PM
Subject: VW Calls

Per Nick we are to pass along calls with reference to VW (unless they are press).

A gentlemen by the name of Roger Cruz has a question about his VW that is currently in the shop.

Can you return his call? **Ex. 6**

Thanks,

Linda

Linda Huffman

Executive Assistant

Office of Enforcement and Compliance Assurance

U.S. EPA

Washington, D.C. 20460

202-564-3139

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Fri 9/18/2015 8:48:31 PM
Subject: FW: Additional VW news clips

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Senn, John
Sent: Friday, September 18, 2015 4:11 PM
To: Giles-AA, Cynthia; Wilson, Shari; Starfield, Lawrence; Brooks, Phillip; Kaul, Meetu; Belser, Evan; Shinkman, Susan; Kelley, Rosemarie
Cc: Conger, Nick
Subject: Additional VW news clips

Here's a second batch of stories from major news outlets on today's announcement. The term "Volkswagen" was also trending on Twitter this afternoon as a result of our announcement, meaning it was one of the most discussed topics on Twitter in the United States during that time.

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Washington Post:

http://www.washingtonpost.com/news/energy-environment/wp/2015/09/18/epa-volkswagen-

used-defeat-device-to-circumvent-air-pollution-controls/

EPA: Volkswagen used 'defeat device' to circumvent air pollution controls

By Joby Warrick September 18 at 1:04 PM

The Environmental Protection Agency on Friday accused Volkswagen of installing a software "defeat device" that circumvented pollution controls on nearly a half-million Volkswagens and Audis.

The regulatory agency filed a notice of violation against the German automaker, saying the company deliberately cheated on clean-air rules by installing the software of five of its models since 2008. An EPA statement warned of possible civil penalties and hinted of a future possible recall, saying it was "incumbent on Volkswagen to initiate the process" to fix the affected cars' emissions systems.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the EPA's assistant administrator for EPA's Office of Enforcement and Compliance Assurance.

EPA officials, in a joint probe with California's regulatory agency, determined that Volkswagen had inserted a sophisticated algorithm in the cars' emissions software that could detect when a vehicle was undergoing emissions testing. The software, which the EPA called a "defeat device," would turn on full emissions controls during testing, and switch them off again under normal driving conditions.

As a result, the cars emitted far more pollution–up to 40 times the federal standard for the pollutant known as NOx, a component in urban smog, the EPA said.

The software was installed in Volkwagen's Golfs, Jettas and Beetles and Audi A3s beginning in the model year 2009, and in Volkswagen's Passat models beginning in 2014. EPA officials said no action was required by owners of the car, but they suggested that Volkswagen would be

compelled to address the problem.

"Our goal now is to ensure that the affected cars are brought into compliance, said Richard Corey, the executive officer for California's Air Resources Board." He said federal and state agencies intended to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

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Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

Agency says German auto maker circumvented air-pollution standards with software

By AMY HARDER

WASHINGTON—The U.S. Environmental Protection Agency issued a notice on Friday alleging that Volkswagen AG circumvented air-pollution standards with software installed on nearly a half million cars sold in the U.S. since 2008.

Officials said Volkswagen could face penalties of up to $37,500 per vehicle, or a total of more than $18 billion, though it remained unclear whether the government would eventually levy such a large penalty. Officials said the German auto maker violated the federal Clean Air Act.

The agency said that owners of these cars don't need to take any action right now and that while the cars have emissions exceeding federal standards, "these violations do not present a safety hazard and the cars remain legal to drive," according to the EPA.

Officials said a recall hasn't been announced and an investigation continues. They plan to at some point order Volkswagen to fix the vehicles, officials said.

Top EPA officials made the announcement alongside the California Air Resources Board, which is separately investigating the alleged use of the software, which EPA describes as a "defeat device." The software reduces the effectiveness of a car's emission control system during normal driving conditions and enables the car to emit nitrogen oxides at up to 40 times the allowable standard, according to the EPA.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance at the EPA.

"Volkswagen Group of America Inc., Volkswagen AG and Audi AG received today notice from the U.S. Environmental Protection Agency, U.S. Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen said in a statement. "VW is cooperating with the investigation; we are unable to comment further at this time."

EPA said that its allegations cover roughly 482,000 diesel passenger cars with model years between 2009 and 2015 and sold in the U.S. since 2008. They include the following models: the Jetta, Beetle, Audi A3, Golf and Passat.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the "defeat device" software, Volkswagen was violating two parts of the Clean Air Act.

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NPR:

http://www.npr.org/sections/thetwo-way/2015/09/18/441467960/volkswagen-used-defeat-device-to-skirt-emissions-rules-epa-says

Volkswagen Used 'Defeat Device' To Skirt Emissions Rules, EPA Says

BILL CHAPPELL

Saying Volkswagen violated the Clean Air Act, the Environmental Protection Agency says the company's diesel-powered cars have sophisticated software that detects emissions testing – and "turns full emissions controls on only during the test."

Installed on four-cylinder cars, the software, which the EPA calls a "defeat device" that's meant to trick official tests, allowed diesel Jettas, Beetles, and other cars to "emit up to 40 times more pollution" than allowed under U.S. emission standards.

The agency says that after the carmaker was confronted with emission test results this month, it admitted that the cars contain defeat devices.

Volkswagen must now fix the cars' emissions control systems, the agency says, adding that Volkswagen could be liable for civil penalties and other punishment. The cars in question are popular Volkswagen and Audi models that were made from 2009 to this year.

The affected diesel cars include:

- Jetta (Model Years 2009 – 2015)
- Beetle (Model Years 2009 – 2015)
- Audi A3 (Model Years 2009 – 2015)
- Golf (Model Years 2009 – 2015)
- Passat (Model Years 2014-2015)

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance.

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Reuters:

http://www.reuters.com/article/2015/09/18/us-usa-volkswagen-idUSKCN0RI1VK20150918

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG (VOWG_p.DE) could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel

cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

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The Hill:

http://thehill.com/policy/energy-environment/254188-epa-accuses-vw-of-going-around-federal-emissions-standards

Feds accuse VW of going around federal emissions standards

By Devin Henry - 09/18/15 12:50 PM EDT

The Environmental Protection Agency (EPA) is accusing Volkswagen of looking to circumvent federal air pollutant emission standards for the last six years.

EPA officials alleged Friday that about 482,000 VW vehicles sold since 2008 violate the Clean Air Act due to software installed on the vehicles that turns off required air pollution protections.

Janet McCabe, an acting assistant administrator, said the EPA "intends to hold VW responsible to recall the vehicles" and fix the emissions problem. The company could face up to an $18 billion fine for the violations.

The EPA issued VW a Clean Air Act violation notice Friday, alleging it used a software algorithm on certain vehicles that would turn on emission controls only when they undergo official emissions testing.

This "defeat device," the EPA said, would switch off those controls during normal operation, which means the vehicles could emit up to 40 times the amount of nitrogen oxide allowed under federal air pollution standards.

"These violations are very serious … not only because they result in excess emissions, but also because VW was concealing the fact from EPA, the state of California and from consumers," Assistant Administrator Cynthia Giles said. "We expected better from VW."

Federal law requires manufacturers to certify to the EPA that their cars meet emissions standards before selling their vehicles in the U.S. Cars with defeat devices cannot be certified, the EPA said.

A VW statement said only that the company had received the violation notice and is cooperating with the investigation.

The EPA and the California Air Resources Board discovered the defeat device during an analysis at West Virginia State University, the EPA said. Officials said their investigation into the incident is ongoing and wouldn't give many more details about how it developed or what the outcome might be.

The agency is not ordering a recall or announcing penalties at the moment, and officials said the cars are safe and legal to drive. The Friday announcement, Giles said, was meant to "inform the public right away and to put VW on notice of our continuing investigation."

The EPA said the announcement covers VW Jettas, Beetles, Golfs and Audi A3s with model years between 2009 and 2015, as well as the VW Passat with model years 2014 and 2015.

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The Atlantic:

http://www.theatlantic.com/technology/archive/2015/09/volkswagens-game-of-make-belief/406159/

Volkswagen's Game of Make-Believe

The company inserted a device into almost 500,000 cars meant to trick emissions testing, the EPA says.

ROBINSON MEYER

One of the great lessons of the pioneering computer scientist Alan Turing is this: Computers are only pretending machines. Software is always just imitating something else.

Volkswagen seems to have taken this maxim to new heights. The Environmental Protection Agency alleges that the company installed "defeat devices" in its four-cylinder Volkswagen and Audi-brand diesel cars from 2009 to 2015.

These devices, essentially, let the cars pretend to not break the law. The software could sense when the car was undergoing emissions testing and activate its pollution-control systems accordingly. When the car was being driven during normal use, these systems largely did not activate—making the car a much heavier polluter in real-life than it looked on paper.

With those systems deactivated, the car's emissions violated the Clean Air Act and California's state pollution-control regulation.

"Using a defeat device in cars to evade clean-air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance, in a statement.

There are almost 500,000 vehicles on American roads with the devices installed, according to the EPA. Volkswagen must now pay to repair the emissions systems in affected cars. The government may also fine the company as much as $18 billion.

The device was discovered by researchers at West Virginia University, who notified the EPA and California state authorities. The two authorities investigated further, and after demanding "an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices," said a statement from the agency.

I reached out to Volkswagen for comment and haven't heard back yet. The Times reports that the company is complying with investigations.

Christian Science Monitor:

http://www.csmonitor.com/Business/In-Gear/2015/0918/Why-the-EPA-is-forcing-Volkswagen-to-recall-nearly-500-000-cars

Why the EPA is forcing Volkswagen to recall nearly 500,000 cars

Volkswagen AG, the German car manufacturer, is under investigation by California and US emissions regulators for allegedly circumventing emission tests with a new device.

By Corey Fedde, Staff SEPTEMBER 18, 2015

Volkswagen AG is under investigation for circumventing clean air rules.

German automotive company Volkswagen AG is under investigation by California and US environmental regulators. The US Environmental Protection Agency told Reuters Volkswagen allegedly used software to circumvent emissions testing of specific air pollutants.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an EPA enforcement officer, told Reuters via teleconference.

The feature, known as a "defeat device," is allegedly present in 4 cylinder Volkswagen and Audi vehicles from 2009-2015, which total nearly 500,000 vehicles. The device is programmed to detect when the car is undergoing an emissions test and turn on the full emissions controls. The device then turns the emission controls off during normal driving. The result being far more pollution than the company reported, the EPA told The New York Times.

The pollutant the "defeat device" is designed to conceal, nitrogen oxide, has been linked by public health officials to variety of health problems, including asthma.

The 500,000 diesel vehicle models affected include 2009-2015 Volkswagen Jettas, Beetles, Golfs, Passats, and Audi A3s.

The violation and investigation belie a growing trend in more aggressive environmental enforcement from federal regulators. In November 2014, the administration announced its largest ever penalty for a violation of the Clean Air Act on Korean automakers Hyundai Motor and Kia Motors. The fine involved a $300 million settlement for overstating vehicle fuel-economy standards on more than 1 million cars.

According to The New York Times, analysts say the crackdown is meant to send a clear message to automakers that circumventing federal rules will not be tolerated.

California, the EPA, and the Justice Department are working together on the investigation.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health. Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations," Ms. Giles told the Times.

LA Times:

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Volkswagen is accused of sidestepping emissions rules, 'cheating' pollution tests

By JERRY HIRSCH

Federal and California environmental regulators accused Volkswagen of using software that "cheats" pollution testing in nearly 500,000 recent model VWs and Audis by circumventing emission standards in its diesel cars.

The German automaker will eventually have to recall all of the vehicles and change the emissions systems at its own expense, regulators said. Additionally it could face a fine of about $18 billion, or $35,500 per car, federal environmental officials said.

The Environmental Protection Agency on Friday issued the German automaker a "notice of violation" of the Clean Air Act for both VW models and the company's Audi luxury brand. It covers models equipped with four-cylinder diesel engines. The California Air Resources Board issued a similar letter.

Volkswagen and Audi vehicles from model years 2009-2015 have the software, which uses an algorithm that detects when the vehicle is undergoing pollution tests and changes the way it performs from when it is being driven on the open road.

It "is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "EPA is committed to making sure that all automakers play by the same rules."

"We expected better from VW," Giles said.

Air Resources Board Executive Officer Richard Corey said the California agency wants to bring the cars "into compliance, to dig more deeply into the extent and implications of Volkswagen's

efforts to cheat on clean air rules, and to take appropriate further action."

Volkswagen said it is cooperating with the investigation.

"We are unable to comment further at this time," the company said in a statement.

The affected diesel models include: Jetta (model years 2009 – 2015,) Beetle (model years 2009 – 2015,) Audi A3 (model years 2009 – 2015,) Golf (model years 2009 – 2015) and Passat (model years 2014-2015.)

Detroit Free Press:

http://www.freep.com/story/money/cars/2015/09/18/epa-volkswagen-used-software-skirt-emissions-rules/72399372/

EPA: Volkswagen used software to skirt emissions rules

By Greg Gardner

The U.S. Environmental Protection Agency and California are accusing Volkswagen of violating the Clean Air Act by using software that allows hundred of thousands of VW and Audi diesel-powered cars to get around emission standards.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for enforcement and compliance assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The agency's notice of violation covers about 482,000 diesel cars sold between 2009 and 2015

model years.

Affected diesel models include:

Jetta (model years 2009 – 2015)

Beetle (model years 2009 – 2015)

Audi A3 (model years 2009 – 2015)

Golf (model years 2009 – 2015)

Passat (model years 2014-2015)

California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board (CARB) have both initiated investigations based on Volkswagen's alleged actions.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said CARB executive officer Richard Corey. "Our goal is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The federal and California regulators say Volkswagen used a sophisticated software algorithm on certain Volkswagen vehicles that detects when the car is undergoing official emissions testing and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations.

As a result the cars met emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the permissible standard. The software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

Corey said testing groups in Europe found information that indicated Volkswagen may have manipulated its emission tests and told California regulators about their suspicions.

NOx pollution contributes to nitrogen dioxide, ground-level ozone and fine particulate matter. Exposure to these pollutants has been linked with a range of serious health effects, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, elderly people and those with pre-existing respiratory disease are particularly at risk for health effects of these pollutants.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified. By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, Volkswagen violated two important provisions of the Clean Air Act.

EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization. The researchers raised questions about emissions levels, and the agencies began further investigations into the issue. In September, after EPA and CARB demanded an explanation for the emission problems, Volkswagen admitted that the cars contained defeat devices.

VW may be liable for civil penalties of up to $37,500 per vehicle found to be violating the standard, or potentially more than $18 billion.

It is incumbent upon Volkswagen to initiate the process that will fix the cars' emissions systems. Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time.

AP (via ABC News):

http://abcnews.go.com/Politics/trump-candidates-criticize-donald-muslim-comments/story?id=33858500

EPA Says VW Intentionally Violates Clean Air Standards

By MATTHEW DALY, ASSOCIATED PRESS WASHINGTON — Sep 18, 2015, 12:42 PM ET

The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.

Mashable:

http://mashable.com/2015/09/18/volkswagen-recall-emissions/#uL1ctrM4JZkb

Volkswagen urged to recall cars for allegedly cheating emissions test

BY CHRIS PERKINS

Automakers are under intense pressure to meet emissions regulations put in place by the world's governments. Volkswagen allegedly had a slightly different solution.

The U.S. Environmental Protection Agency (EPA) ordered a recall of almost 500,000 Volkswagen and Audi vehicles equipped with four-cylinder diesel engines, for software designed to sidestep emissions regulations, reports the New York Times.

In total, 482,000 vehicles are being implicated, including the 2009-2015 Volkswagen Golf, Beetle, Jetta and Beetle, the 2014-2015 Volkswagen Passat and the 2009-2015 Audi A3. The cars were possibly installed with a "defeat device," a piece of software designed to detect when the car is undergoing emissions testing and turn on all of the car's emissions control systems then. In normal driving, the systems would turn off, causing 40 times larger nitrogen oxide emissions, according to the E.P.A.

Nitrogen oxide is a major contributor to smog, which can lead to increased respiratory problems and premature death.

The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation. The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation.

U.S. regulators hope that this recall will send a message to automakers to not develop software to skirt regulations. Last November, Hyundai and Kia were fined $100 million for violating the Clean Air Act. The two companies inflated their fuel economy figures for their 2012 vehicles.

The likely reason why Volkswagen could go the trouble to develop and use software like this is to boost performance; emissions control equipment tends to suck power out of an engine.

Researchers from West Virginia University, working with the International Council on Clean Transportation, discovered the software, according to the EPA's press release.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time," said a representative for Volkswagen.

A representative for the EPA wasn't immediately available for comment.

It's unclear if this issue only pertains to U.S. model Volkswagens and Audis equipped with four-cylinder diesels, or their world-market counterparts as well.

A report from Jalopnik notes that all of Volkswagen's ads for its diesel models have been deleted from YouTube, apparently at the company's request.

John Senn

Deputy Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

(202) 564-8996 - senn.john@epa.gov

https://twitter.com/EPAJustice

To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Huffman, Linda[Huffman.Linda@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
Cc: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Bunker, Byron
Sent: Fri 9/18/2015 8:54:22 PM
Subject: RE: VW Calls

Hi Meetu,

We were hoping that our webpage would handle owner questions – see the Information for Owners of the Affected Vehicles section of our webpage

http://www3.epa.gov/otaq/cert/violations.htm

If need be, we could direct people to VW's customer service line http://www.vw.com/contact/ But, I am not so keen to directly link to VW at this point.

Thanks,

Byron

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Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

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From: Kaul, Meetu
Sent: Friday, September 18, 2015 4:47 PM
To: Huffman, Linda; Werner, Jacqueline; Bunker, Byron; Wehrly, Linc; Belser, Evan
Cc: Orehowsky, Gregory
Subject: RE: VW Calls

Byron and Linc,

Janet was handling the "what about my car" type questions today. Does OTAQ have a plan for dealing with the follow up calls that are coming in? Who should these folks be directed to?

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069

Email: kaul.meetu@epa.gov

From: Huffman, Linda
Sent: Friday, September 18, 2015 4:37 PM
To: Werner, Jacqueline; Kaul, Meetu
Subject: VW Calls

Per Nick we are to pass along calls with reference to VW (unless they are press).

A gentlemen by the name of Ex. 6 has a question about his VW that is currently in the shop.

Can you return his call? Ex. 6

Thanks,

Linda

Linda Huffman

Executive Assistant

Office of Enforcement and Compliance Assurance

U.S. EPA

Washington, D.C. 20460

202-564-3139

To: Reynolds, Thomas[Reynolds.Thomas@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Allen, Laura[Allen.Laura@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Purchia, Liz
Sent: Fri 9/18/2015 9:02:22 PM
Subject: New NYT headline

VW Is Said to Cheat on Diesel Emissions; U.S. Orders Big Recall

Liz Purchia

Deputy Associate Administrator, Public Affairs

U.S. Environmental Protection Agency

Office: 202-564-6691

Cell: 202-841-2230

To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
Cc: Senn, John[Senn.John@epa.gov]
From: Conger, Nick
Sent: Fri 9/18/2015 9:15:33 PM
Subject: FW: VW - Clean Air Act

From: Giles-AA, Cynthia
Sent: Friday, September 18, 2015 4:51 PM
To: Conger, Nick
Subject: FW: VW - Clean Air Act

From: Ex. 6
Sent: Friday, September 18, 2015 4:46 PM
To: Giles-AA, Cynthia
Subject: VW - Clean Air Act

USEPA Headquarters

Cynthia Giles

Dear Ms Giles,

I Read your quote today about VW's behavior being illegal and a threat to the public's health.

My 2011 VW Golf diesel has been in the VW service department for over a week now waiting to have expensive air pollution devices replaced. Today they said it is ready using new original parts and software.

Respectfully, Ms Giles, my question is should I allow VW to install the same parts and related software allowing them to be in violation of compliance with the Clean Air Act? Would I be complicit in their wrong doings if I did not insist on an air pollution system that would be in concurrence with the law?

Thank you for any help you can give.

Ex. 6

Naples, FL

To: Senn, John[Senn.John@epa.gov]
From: Belser, Evan
Sent: Fri 9/18/2015 9:19:51 PM
Subject: RE: Additional VW news clips

I may have missed it; could you forward the first batch?

From: Senn, John
Sent: Friday, September 18, 2015 4:11 PM
To: Giles-AA, Cynthia; Wilson, Shari; Starfield, Lawrence; Brooks, Phillip; Kaul, Meetu; Belser, Evan; Shinkman, Susan; Kelley, Rosemarie
Cc: Conger, Nick
Subject: Additional VW news clips

Here's a second batch of stories from major news outlets on today's announcement. The term "Volkswagen" was also trending on Twitter this afternoon as a result of our announcement, meaning it was one of the most discussed topics on Twitter in the United States during that time.

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Washington Post:

http://www.washingtonpost.com/news/energy-environment/wp/2015/09/18/epa-volkswagen-used-defeat-device-to-circumvent-air-pollution-controls/

EPA: Volkswagen used 'defeat device' to circumvent air pollution controls

By Joby Warrick September 18 at 1:04 PM

The Environmental Protection Agency on Friday accused Volkswagen of installing a software "defeat device" that circumvented pollution controls on nearly a half-million Volkswagens and Audis.

The regulatory agency filed a notice of violation against the German automaker, saying the company deliberately cheated on clean-air rules by installing the software of five of its models since 2008. An EPA statement warned of possible civil penalties and hinted of a future possible

recall, saying it was "incumbent on Volkswagen to initiate the process" to fix the affected cars' emissions systems.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the EPA's assistant administrator for EPA's Office of Enforcement and Compliance Assurance.

EPA officials, in a joint probe with California's regulatory agency, determined that Volkswagen had inserted a sophisticated algorithm in the cars' emissions software that could detect when a vehicle was undergoing emissions testing. The software, which the EPA called a "defeat device," would turn on full emissions controls during testing, and switch them off again under normal driving conditions.

As a result, the cars emitted far more pollution–up to 40 times the federal standard for the pollutant known as NOx, a component in urban smog, the EPA said.

The software was installed in Volkwagen's Golfs, Jettas and Beetles and Audi A3s beginning in the model year 2009, and in Volkswagen's Passat models beginning in 2014. EPA officials said no action was required by owners of the car, but they suggested that Volkswagen would be compelled to address the problem.

"Our goal now is to ensure that the affected cars are brought into compliance, said Richard Corey, the executive officer for California's Air Resources Board." He said federal and state agencies intended to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

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Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

Agency says German auto maker circumvented air-pollution standards with software

By AMY HARDER

WASHINGTON—The U.S. Environmental Protection Agency issued a notice on Friday alleging that Volkswagen AG circumvented air-pollution standards with software installed on nearly a half million cars sold in the U.S. since 2008.

Officials said Volkswagen could face penalties of up to $37,500 per vehicle, or a total of more than $18 billion, though it remained unclear whether the government would eventually levy such a large penalty. Officials said the German auto maker violated the federal Clean Air Act.

The agency said that owners of these cars don't need to take any action right now and that while the cars have emissions exceeding federal standards, "these violations do not present a safety hazard and the cars remain legal to drive," according to the EPA.

Officials said a recall hasn't been announced and an investigation continues. They plan to at some point order Volkswagen to fix the vehicles, officials said.

Top EPA officials made the announcement alongside the California Air Resources Board, which is separately investigating the alleged use of the software, which EPA describes as a "defeat device." The software reduces the effectiveness of a car's emission control system during normal driving conditions and enables the car to emit nitrogen oxides at up to 40 times the allowable standard, according to the EPA.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance at the EPA.

"Volkswagen Group of America Inc., Volkswagen AG and Audi AG received today notice from the U.S. Environmental Protection Agency, U.S. Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters,"

Volkswagen said in a statement. “VW is cooperating with the investigation; we are unable to comment further at this time.”

EPA said that its allegations cover roughly 482,000 diesel passenger cars with model years between 2009 and 2015 and sold in the U.S. since 2008. They include the following models: the Jetta, Beetle, Audi A3, Golf and Passat.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the “defeat device” software, Volkswagen was violating two parts of the Clean Air Act.

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NPR:

http://www.npr.org/sections/thetwo-way/2015/09/18/441467960/volkswagen-used-defeat-device-to-skirt-emissions-rules-epa-says

Volkswagen Used 'Defeat Device' To Skirt Emissions Rules, EPA Says

BILL CHAPPELL

Saying Volkswagen violated the Clean Air Act, the Environmental Protection Agency says the company's diesel-powered cars have sophisticated software that detects emissions testing – and "turns full emissions controls on only during the test."

Installed on four-cylinder cars, the software, which the EPA calls a "defeat device" that's meant to trick official tests, allowed diesel Jettas, Beetles, and other cars to "emit up to 40 times more pollution" than allowed under U.S. emission standards.

The agency says that after the carmaker was confronted with emission test results this month, it admitted that the cars contain defeat devices.

Volkswagen must now fix the cars' emissions control systems, the agency says, adding that Volkswagen could be liable for civil penalties and other punishment. The cars in question are popular Volkswagen and Audi models that were made from 2009 to this year.

The affected diesel cars include:

• Jetta (Model Years 2009 – 2015)

• Beetle (Model Years 2009 – 2015)

• Audi A3 (Model Years 2009 – 2015)

• Golf (Model Years 2009 – 2015)

• Passat (Model Years 2014-2015)

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance.

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Reuters:

http://www.reuters.com/article/2015/09/18/us-usa-volkswagen-idUSKCN0RI1VK20150918

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG (VOWG_p.DE) could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

-

The Hill:

http://thehill.com/policy/energy-environment/254188-epa-accuses-vw-of-going-around-federal-emissions-standards

Feds accuse VW of going around federal emissions standards

By Devin Henry - 09/18/15 12:50 PM EDT

The Environmental Protection Agency (EPA) is accusing Volkswagen of looking to circumvent federal air pollutant emission standards for the last six years.

EPA officials alleged Friday that about 482,000 VW vehicles sold since 2008 violate the Clean Air Act due to software installed on the vehicles that turns off required air pollution protections.

Janet McCabe, an acting assistant administrator, said the EPA "intends to hold VW responsible to recall the vehicles" and fix the emissions problem. The company could face up to an $18 billion fine for the violations.

The EPA issued VW a Clean Air Act violation notice Friday, alleging it used a software algorithm on certain vehicles that would turn on emission controls only when they undergo official emissions testing.

This "defeat device," the EPA said, would switch off those controls during normal operation, which means the vehicles could emit up to 40 times the amount of nitrogen oxide allowed under federal air pollution standards.

"These violations are very serious … not only because they result in excess emissions, but also because VW was concealing the fact from EPA, the state of California and from consumers," Assistant Administrator Cynthia Giles said. "We expected better from VW."

Federal law requires manufacturers to certify to the EPA that their cars meet emissions standards before selling their vehicles in the U.S. Cars with defeat devices cannot be certified, the EPA said.

A VW statement said only that the company had received the violation notice and is cooperating with the investigation.

The EPA and the California Air Resources Board discovered the defeat device during an analysis at West Virginia State University, the EPA said. Officials said their investigation into the incident is ongoing and wouldn't give many more details about how it developed or what the outcome might be.

The agency is not ordering a recall or announcing penalties at the moment, and officials said the cars are safe and legal to drive. The Friday announcement, Giles said, was meant to "inform the public right away and to put VW on notice of our continuing investigation."

The EPA said the announcement covers VW Jettas, Beetles, Golfs and Audi A3s with model years between 2009 and 2015, as well as the VW Passat with model years 2014 and 2015.

-

The Atlantic:

http://www.theatlantic.com/technology/archive/2015/09/volkswagens-game-of-make-belief/406159/

Volkswagen's Game of Make-Believe

The company inserted a device into almost 500,000 cars meant to trick emissions testing, the EPA says.

ROBINSON MEYER

One of the great lessons of the pioneering computer scientist Alan Turing is this: Computers are only pretending machines. Software is always just imitating something else.

Volkswagen seems to have taken this maxim to new heights. The Environmental Protection Agency alleges that the company installed "defeat devices" in its four-cylinder Volkswagen and Audi-brand diesel cars from 2009 to 2015.

These devices, essentially, let the cars pretend to not break the law. The software could sense when the car was undergoing emissions testing and activate its pollution-control systems accordingly. When the car was being driven during normal use, these systems largely did not activate—making the car a much heavier polluter in real-life than it looked on paper.

With those systems deactivated, the car's emissions violated the Clean Air Act and California's state pollution-control regulation.

"Using a defeat device in cars to evade clean-air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance, in a statement.

There are almost 500,000 vehicles on American roads with the devices installed, according to the EPA. Volkswagen must now pay to repair the emissions systems in affected cars. The government may also fine the company as much as $18 billion.

The device was discovered by researchers at West Virginia University, who notified the EPA and California state authorities. The two authorities investigated further, and after demanding "an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices," said a statement from the agency.

I reached out to Volkswagen for comment and haven't heard back yet. The Times reports that the company is complying with investigations.

Christian Science Monitor:

http://www.csmonitor.com/Business/In-Gear/2015/0918/Why-the-EPA-is-forcing-Volkswagen-to-recall-nearly-500-000-cars

Why the EPA is forcing Volkswagen to recall nearly 500,000 cars

Volkswagen AG, the German car manufacturer, is under investigation by California and US emissions regulators for allegedly circumventing emission tests with a new device.

By Corey Fedde, Staff SEPTEMBER 18, 2015

Volkswagen AG is under investigation for circumventing clean air rules.

German automotive company Volkswagen AG is under investigation by California and US environmental regulators. The US Environmental Protection Agency told Reuters Volkswagen allegedly used software to circumvent emissions testing of specific air pollutants.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an EPA enforcement officer, told Reuters via teleconference.

The feature, known as a "defeat device," is allegedly present in 4 cylinder Volkswagen and Audi vehicles from 2009-2015, which total nearly 500,000 vehicles. The device is programmed to detect when the car is undergoing an emissions test and turn on the full emissions controls. The device then turns the emission controls off during normal driving. The result being far more pollution than the company reported, the EPA told The New York Times.

The pollutant the "defeat device" is designed to conceal, nitrogen oxide, has been linked by public health officials to variety of health problems, including asthma.

The 500,000 diesel vehicle models affected include 2009-2015 Volkswagen Jettas, Beetles, Golfs, Passats, and Audi A3s.

The violation and investigation belie a growing trend in more aggressive environmental enforcement from federal regulators. In November 2014, the administration announced its largest ever penalty for a violation of the Clean Air Act on Korean automakers Hyundai Motor and Kia Motors. The fine involved a $300 million settlement for overstating vehicle fuel-economy standards on more than 1 million cars.

According to The New York Times, analysts say the crackdown is meant to send a clear message to automakers that circumventing federal rules will not be tolerated.

California, the EPA, and the Justice Department are working together on the investigation.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health. Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations," Ms. Giles told the Times.

LA Times:

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Volkswagen is accused of sidestepping emissions rules, 'cheating' pollution tests

By JERRY HIRSCH

Federal and California environmental regulators accused Volkswagen of using software that "cheats" pollution testing in nearly 500,000 recent model VWs and Audis by circumventing emission standards in its diesel cars.

The German automaker will eventually have to recall all of the vehicles and change the emissions systems at its own expense, regulators said. Additionally it could face a fine of about $18 billion, or $35,500 per car, federal environmental officials said.

The Environmental Protection Agency on Friday issued the German automaker a "notice of violation" of the Clean Air Act for both VW models and the company's Audi luxury brand. It covers models equipped with four-cylinder diesel engines. The California Air Resources Board issued a similar letter.

Volkswagen and Audi vehicles from model years 2009-2015 have the software, which uses an algorithm that detects when the vehicle is undergoing pollution tests and changes the way it performs from when it is being driven on the open road.

It "is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "EPA is committed to making sure that all automakers play by the same rules."

"We expected better from VW," Giles said.

Air Resources Board Executive Officer Richard Corey said the California agency wants to bring the cars "into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

Volkswagen said it is cooperating with the investigation.

"We are unable to comment further at this time," the company said in a statement.

The affected diesel models include: Jetta (model years 2009 – 2015,) Beetle (model years 2009 – 2015,) Audi A3 (model years 2009 – 2015,) Golf (model years 2009 – 2015) and Passat (model years 2014-2015.)

Detroit Free Press:

http://www.freep.com/story/money/cars/2015/09/18/epa-volkswagen-used-software-skirt-emissions-rules/72399372/

EPA: Volkswagen used software to skirt emissions rules

By Greg Gardner

The U.S. Environmental Protection Agency and California are accusing Volkswagen of violating the Clean Air Act by using software that allows hundred of thousands of VW and Audi diesel-powered cars to get around emission standards.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for enforcement and compliance assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The agency's notice of violation covers about 482,000 diesel cars sold between 2009 and 2015 model years.

Affected diesel models include:

Jetta (model years 2009 – 2015)

Beetle (model years 2009 – 2015)

Audi A3 (model years 2009 – 2015)

Golf (model years 2009 – 2015)

Passat (model years 2014-2015)

California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board (CARB) have both initiated investigations based on Volkswagen's alleged actions.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said CARB executive officer Richard Corey. "Our goal is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The federal and California regulators say Volkswagen used a sophisticated software algorithm on certain Volkswagen vehicles that detects when the car is undergoing official emissions testing and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations.

As a result the cars met emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the permissible standard. The software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

Corey said testing groups in Europe found information that indicated Volkswagen may have manipulated its emission tests and told California regulators about their suspicions.

NOx pollution contributes to nitrogen dioxide, ground-level ozone and fine particulate matter. Exposure to these pollutants has been linked with a range of serious health effects, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, elderly people and those with pre-existing respiratory disease are particularly at risk for health effects of these pollutants.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with

defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified. By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, Volkswagen violated two important provisions of the Clean Air Act.

EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization. The researchers raised questions about emissions levels, and the agencies began further investigations into the issue. In September, after EPA and CARB demanded an explanation for the emission problems, Volkswagen admitted that the cars contained defeat devices.

VW may be liable for civil penalties of up to $37,500 per vehicle found to be violating the standard, or potentially more than $18 billion.

It is incumbent upon Volkswagen to initiate the process that will fix the cars' emissions systems. Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time.

AP (via ABC News):

http://abcnews.go.com/Politics/trump-candidates-criticize-donald-muslim-comments/story?id=33858500

EPA Says VW Intentionally Violates Clean Air Standards

By MATTHEW DALY, ASSOCIATED PRESS WASHINGTON — Sep 18, 2015, 12:42 PM ET

The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.

Mashable:

http://mashable.com/2015/09/18/volkswagen-recall-emissions/#uL1ctrM4JZkb

Volkswagen urged to recall cars for allegedly cheating emissions test

BY CHRIS PERKINS

Automakers are under intense pressure to meet emissions regulations put in place by the world's governments. Volkswagen allegedly had a slightly different solution.

The U.S. Environmental Protection Agency (EPA) ordered a recall of almost 500,000 Volkswagen and Audi vehicles equipped with four-cylinder diesel engines, for software designed to sidestep emissions regulations, reports the New York Times.

In total, 482,000 vehicles are being implicated, including the 2009-2015 Volkswagen Golf, Beetle, Jetta and Beetle, the 2014-2015 Volkswagen Passat and the 2009-2015 Audi A3. The cars were possibly installed with a "defeat device," a piece of software designed to detect when the car is undergoing emissions testing and turn on all of the car's emissions control systems then. In normal driving, the systems would turn off, causing 40 times larger nitrogen oxide emissions, according to the E.P.A.

Nitrogen oxide is a major contributor to smog, which can lead to increased respiratory problems and premature death.

The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation. The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation.

U.S. regulators hope that this recall will send a message to automakers to not develop software to skirt regulations. Last November, Hyundai and Kia were fined $100 million for violating the Clean Air Act. The two companies inflated their fuel economy figures for their 2012 vehicles.

The likely reason why Volkswagen could go the trouble to develop and use software like this is to boost performance; emissions control equipment tends to suck power out of an engine.

Researchers from West Virginia University, working with the International Council on Clean Transportation, discovered the software, according to the EPA's press release.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time," said a representative for Volkswagen.

A representative for the EPA wasn't immediately available for comment.

It's unclear if this issue only pertains to U.S. model Volkswagens and Audis equipped with four-cylinder diesels, or their world-market counterparts as well.

A report from Jalopnik notes that all of Volkswagen's ads for its diesel models have been deleted from YouTube, apparently at the company's request.

John Senn

Deputy Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

(202) 564-8996 - senn.john@epa.gov

https://twitter.com/EPAJustice

To: Zwart, Daniel[daniel.zwart@texasattorneygeneral.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Fri 9/18/2015 9:22:32 PM
Subject: Re: Tex. Atty. Gen.

Hello Daniel and good to hear from you. I can be your point of contact for any questions concerning the VW matter. Meetu could as well but as you can imagine her plate is full. Do you mind if we waited to talk until later next week?

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 18, 2015, at 5:19 PM, Zwart, Daniel <daniel.zwart@texasattorneygeneral.gov> wrote:

> Ms. Kaul:
>
> I saw your name listed in the EPA's latest NOV. I would like to introduce myself via email. Your colleague Evan Belser and I have talked a few times in the past. Would we be able to talk on the phone sometime?
>
> Dan Zwart
> Assistant Attorney General
> 713-225-8921

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: EnergyGuardian
Sent: Fri 9/18/2015 9:32:00 PM
Subject: New PHMSA chief touts 'aggressive kickoff,' imminent safety rule

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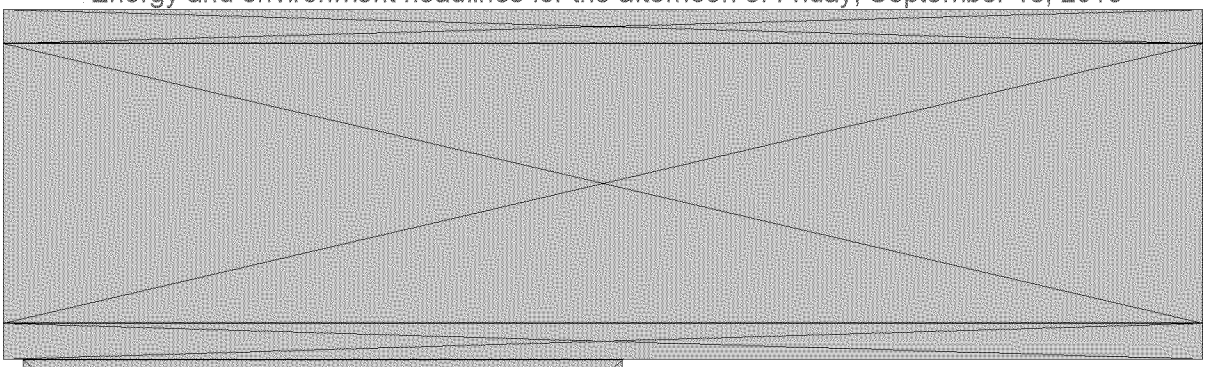
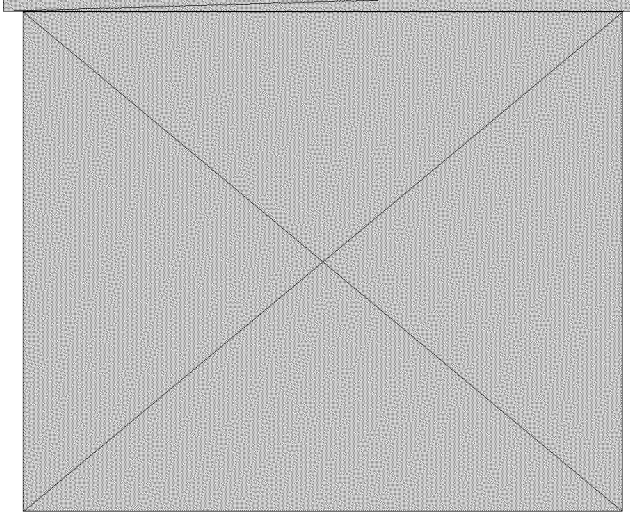
Energy and environment headlines for the afternoon of Friday, September 18, 2015





New PHMSA chief touts 'aggressive kickoff,' imminent safety rule

By Kevin Rogers

The new chief of the Pipeline and Hazardous Materials Safety Administration on Friday told senators that she's had an "aggressive kickoff" to her leadership of the agency, and is ready to play an active role in making the nation's pipeline network more secure by reforming PHMSA's operations and updating its regulations.

At a Senate Commerce subcommittee field hearing in Montana, Administrator Marie Therese

Dominguez, who took office just five weeks ago, said her agency will unveil the first major pipeline regulation of her watch shortly -- as early as next week. The Office of Management and Budget on Friday approved the proposed rule, aimed at improving safety for on-shore hazardous liquid pipelines.

"The proposed regulations will result in critical safety improvements, and we hope that they will spark a robust dialogue moving forward about pipeline safety in the United States," Dominguez said of the long-delayed rule.

PHMSA has come under fire for high-profile pipeline spills this year, including the 101,000 gallon spill of crude oil on the coast of California in May, and a 30,000 gallon spill into the Yellowstone River in January.

Lawmakers have criticized the agency for its slow implementation of 42 congressional mandates under the 2011 Pipeline Safety, Regulatory Certainty and Job Creation Act, which were supposed to be finished by 2013. The agency, which faces reauthorization this year, has completed 26 of the mandates.

Sen. Deb Fischer, R-Neb., chairman of the Surface Transportation and Merchant Marine Infrastructure, Safety, and Security Subcommittee, made it clear she wants to see more progress.

"To date, they have completed well over 50 percent of those mandates, but still have a significant amount to accomplish," Fischer said.

Sen. Jon Tester, D-Mont., who testified at the hearing, said the agency needed to show "who's driving the bus" when it comes to pipelines, and to do so by catching up on the backlog.

Dominguez said that the new regulations would help put to rest a number of those remaining mandates. In addition, she has ordered an organizational assessment of the agency, hoping to "optimize" regulations and enforcement authorities, and is implementing an Agency Safety Action Plan to improve coordination with state governments and identify opportunities for better performance.

"It's asking the question, how can we better leverage our current authorities and our capabilities to improve safety," she said of the plan.

The hearing also afforded representatives of the oil and gas pipeline industry a chance to raise their concerns with the agency.

Phillips 66 President Todd Denton said the industry needs more certainty in how inspections are conducted nationwide.

"We'd like to see a little more consistency among the inspectors," Denton said. "They just have different focuses, so sometimes there's a little bit of inconsistency there."

He also said he wanted a quicker turnaround for inspection results and a transition to "performance-based" regulations and inspections in the agency, rather than mandates.

Dominguez said a recent boost in funding from Congress and subsequent hiring should allow for improved inspection turnaround and more consistency.

But while she said the agency is looking to move toward more performance-based standards, she defended the need for a strong safety baseline through "minimum" federal standards.

"Moving forward, the industry has taken a leadership role, and I greatly appreciate it, and I'm challenging them in an even greater direction on safety management systems and safety management culture," she said.

Dominguez also faced questions on the long-stalled Keystone XL pipeline.

"How would the Keystone pipeline impact Yellowstone County, Montana, as you see it, should we be allowed to construct it?" Sen. Steve Daines, R-Mont., asked.

Dominguez, whose agency has no control over the approval process, said PHMSA would keep a close eye on the project in its early stages, should President Barack Obama's administration approve it.

"It's a very vulnerable time for a pipeline, the construction, the first few years of operation. It requires a lot of monitoring, and it requires a lot of inspection," she said.

Quick Links

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Environmentalists challenging some of West's largest mines

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Researchers find heavy metals along river after mine spill

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Passive house in Portland a banner for green design

Upcoming Events

EPA: VW violated clean air standards on purpose, must fix cars

By Matthew Daly

WASHINGTON (AP) — The Environmental Protection Agency said Friday that Volkswagen intentionally skirted clean air laws by using a piece of software that enabled about 500,000 of its diesel cars to emit fewer smog-causing pollutants during testing than in real-world driving conditions.

The agency ordered VW to fix the cars at its own expense. The German automaker also faces billions of dollars in fines, although exact amounts were not determined.

The cars, all built in the last seven years, are the VW Jetta, Beetle, Golf and Passat models, as well as the Audi A3. The vehicles all contain a device programmed to detect when they are undergoing official emissions testing, the EPA said, adding that the cars only turn on full emissions control systems during that testing. The controls are turned off during normal driving situations, the EPA said.

The EPA called the company's use of the so-called "defeat device" illegal and a threat to public health.

More

Environmentalists challenging some of West's largest mines

By Colleen Slevin

DENVER (AP) — Boosted by a recent victory in Colorado, an environmental group is expanding its legal campaign to try stop coal mining because of climate change by challenging permits for some of the largest mines in the West.

This time, New Mexico-based WildEarth Guardians is asking that a federal judge block mining at the Antelope Mine and Black Thunder mines in Wyoming's Powder River Basin, the El Segundo Mine in New Mexico and the Bowie No. 2 Mine in Colorado.

But it's taking the argument further. Rather than just saying that federal regulators should take the climate change impacts of individual mines into account before approving permits, the group claims that they should be looking at the cumulative effect of mining as a whole and whether the nation should allow any more.

In May, WildEarth Guardians persuaded a Denver federal judge to order a new environmental review for the Colowyo mine in northwestern Colorado in part because Judge R. Brooke Jackson thought regulators essentially rubber stamped its permit rather than taking a serious look at the environmental impacts under federal law, including the effect burning the mined coal would have on greenhouse gases. While that mine supplied coal to a nearby power plant, the mines targeted now are owned by some of the biggest players in the struggling coal business and export coal abroad as well as provide fuel to utilities across the country.

More

GOP lawmaker vows to boycott pope's speech to Congress

By Matthew Daly

WASHINGTON (AP) — A Republican lawmaker said he will boycott Pope Francis' speech to Congress next week because of the possibility the pontiff will discuss his support for policies to fight climate change.

Three-term Rep. Paul Gosar of Arizona said that as a Catholic, he initially was excited to learn of the pope's visit to Washington and his address to Congress. But Gosar said he

decided not to attend after he read media reports that the pope plans to devote much of the speech to advocating for what Gosar calls "flawed climate change policies."

In a column Thursday on the conservative website townhall.com, Gosar wrote that he was appalled by a papal teaching document that "condemned anyone skeptical of the link between human activity and climate change." He said that if the Pope stuck to standard Christian theology or spoke out with moral authority against violent Islam, "I would be there cheering him on."

If the pope "urged the Western nations to rescue persecuted Christians in the Middle East, I would back him wholeheartedly," Gosar added. "But when the pope chooses to act and talk like a leftist politician, then he can expect to be treated like one."

More

Researchers find heavy metals along river after mine spill

By Dan Elliott

DENVER (AP) — Researchers say they found scattered accumulations of heavy metals along a 60-mile stretch of riverbank in Colorado and New Mexico a month after the Gold King Mine wastewater spill and say that any potential threat to crops and livestock should be studied further.

David Weindorf of Texas Tech University and Kevin Lombard of New Mexico State University said they found patches of discolored sludge containing elevated levels of iron, copper, zinc, arsenic and lead along the Animas River from around Farmington, New Mexico, to just north of Durango, Colorado.

The concentrations of those metals were higher than at other sites they tested on the riverbank and on nearby irrigated and non-irrigated land, Weindorf said.

None of the high readings was found in ditches that carry irrigation water to crops, Weindorf said. Irrigation systems along the Animas were closed before the mustard-colored plume of tainted wastewater drifted downstream after the Aug. 5 blowout at the Gold King in southwestern Colorado.

More

Change-of-plea hearing set Oct. 20 in deadly platform fire

By Kevin McGill

NEW ORLEANS (AP) — Criminal charges filed recently against a Houston company over a 2012 offshore oil platform fire that killed three workers appear headed for resolution.

Neither federal prosecutors nor defense lawyers for Black Elk Energy Operations would comment Friday on whether plea talks are underway. But a federal judge Thursday set three proceedings for the morning of Oct. 20: an initial appearance, an arraignment and then a re-arraignment listed on the docket as a change-of-plea hearing.

Black Elk was charged with six criminal counts alleging safety violations in connection with the November 2012 fire off Louisiana's coast. The charges were not brought by a grand jury. They were made in a bill of information filed by prosecutors — typically a sign that a defendant is cooperating.

A message from the American Petroleum Institute

America is now the world's #1 natural gas producer and will soon be #1 in oil. Now more than ever, abundant energy means abundant prosperity, opportunity and security for all Americans.

Learn more at EnergyTomorrow.org

East Arkansas power plant brought down in implosions

HELENA-WEST HELENA, Ark. (AP) — A 51-year-old power plant in Arkansas was brought down in a series of implosions as Entergy Arkansas moves forward with more modern electricity-generating facilities.

The demolition was finished Thursday at the Robert E. Ritchie power plant in Helena-West Helena, a city in the Mississippi Delta region about 70 miles southwest of Memphis, Tennessee.

The plant's boiler and a 450-foot emissions stack were safely brought to the ground on Thursday.

The plant was built in the 1960s and utility spokesman David Lewis says the plant was officially retired in 2013.

More

Zion Park names California, Nevada hikers killed in flooding

By The Associated Press

ZION NATIONAL PARK, Utah (AP) — Hours after rescuers traversed a 100-foot drop into a rugged Utah area to find the seventh victim of a flash flood, Zion National Park officials released the names of all those killed.

The hikers — six from California and one from Nevada — died when fast-moving floodwaters rushed through a narrow park canyon Monday afternoon.

Late Thursday night, the park listed the California fatalities as Mark MacKenzie, 56, of Valencia; Linda Arthur, 57, and Steve Authur, 58, both of Camarillo; Gary Favela, 51, of Rancho Cucamonga; Muku Reynolds, 59, of Chino; and Robin Brum, 53, of Camarillo. The seventh flooding victim was Don Teichner, 55, of Mesquite, Nevada.

Park officials said Linda Arthur's body was found earlier Thursday a few miles from the sandstone gorge where the group got trapped during a violent rainstorm, in an area that had been unreachable previously amid fears of more flooding. The rest of the victims were found earlier this week.

More

Agency investigates deaths of 25 walrus on Alaska coast

By Dan Joling

ANCHORAGE, Alaska (AP) — The U.S. Fish and Wildlife Service said Friday it is investigating the deaths of 25 Pacific walrus found on an isolated northwest Alaska beach.

A person connected to an Air Force radar station in the remote area spotted the animals and notified the agency this week. The walrus included 12 pups, and some were missing their heads and tusks.

The cause of death has not been determined, said Fish and Wildlife Service spokeswoman Andrea Medeiros, and investigators do not want to speculate.

"We can't come to any conclusions based on a report," she said Friday. "You have to go out and investigate."

More

Guest lineups for the Sunday news shows

By The Associated Press

WASHINGTON (AP) — Guest lineups for the Sunday TV news shows:

- ABC's "This Week" — Republican presidential candidates Marco Rubio and Donald Trump; New York Mayor Bill de Blasio.
- NBC's "Meet the Press" — Republican presidential candidate John Kasich; JPMorgan Chase CEO Jamie Dimon.
- CBS' "Face the Nation" — Democratic presidential candidate Hillary Rodham Clinton; Republican presidential candidate Rand Paul.
- CNN's "State of the Union" — Kasich; Republican presidential candidate Chris Christie.
- "Fox News Sunday" — Republican presidential candidate Carly Fiorina; Cardinal Donald Wuerl, the archbishop of Washington; Rev. Thomas Rosica, a Vatican spokesman.

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Week in Review – House Panel Moves To Lift Export Ban

Congress Gears up for Papal Visit.

Click here to read the brief

Clinton promises Keystone opinion "soon"

Campaigning in New Hampshire Thursday, Democratic presidential candidate Hillary Clinton, who's refused to offer an opinion on the Keystone XL pipeline while it's still under consideration by the Obama administration, said she's "putting the White House on notice" that she "can't wait too much longer," Politico reports.

More

Natural gas hitting record in 2015: Analyst

A senior analyst at Bentek Energy said Friday that natural gas generation is on course for a record year, mainly as a result of low prices, Platts reports.

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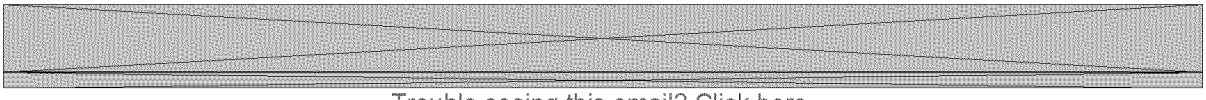

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To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: EnergyGuardian
Sent: Fri 9/18/2015 9:32:00 PM
Subject: New PHMSA chief touts 'aggressive kickoff,' imminent safety rule

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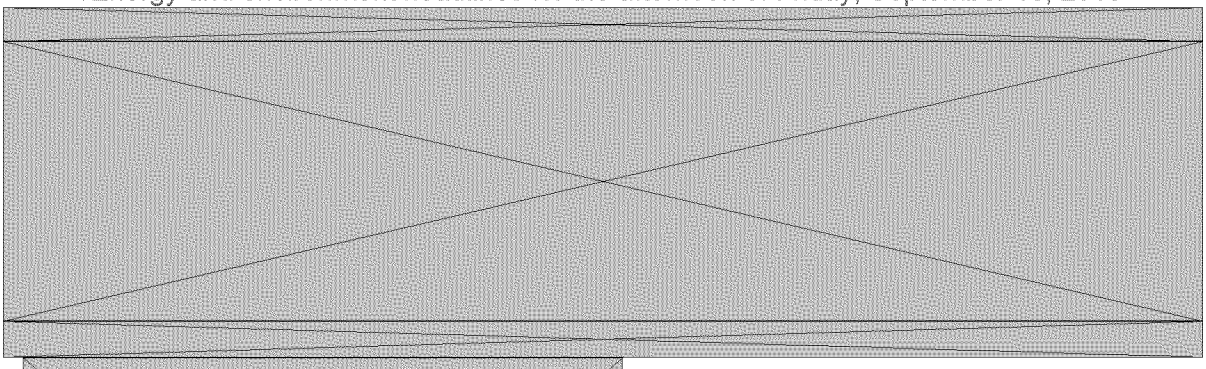
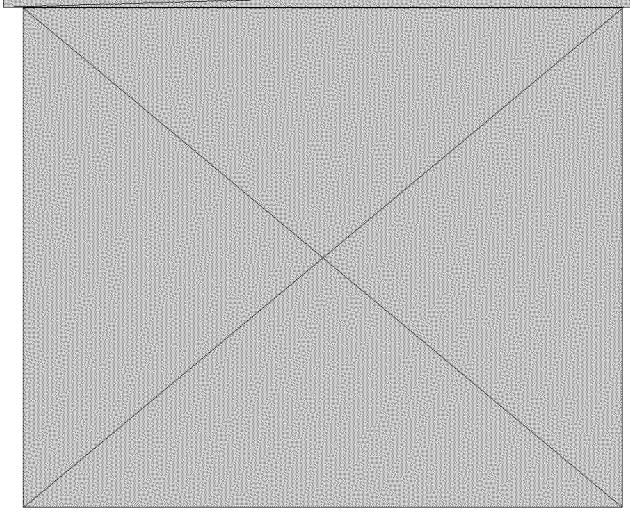
Energy and environment headlines for the afternoon of Friday, September 18, 2015





New PHMSA chief touts 'aggressive kickoff,' imminent safety rule

By Kevin Rogers

The new chief of the Pipeline and Hazardous Materials Safety Administration on Friday told senators that she's had an "aggressive kickoff" to her leadership of the agency, and is ready to play an active role in making the nation's pipeline network more secure by reforming PHMSA's operations and updating its regulations.

At a Senate Commerce subcommittee field hearing in Montana, Administrator Marie Therese

Dominguez, who took office just five weeks ago, said her agency will unveil the first major pipeline regulation of her watch shortly -- as early as next week. The Office of Management and Budget on Friday approved the proposed rule, aimed at improving safety for on-shore hazardous liquid pipelines.

"The proposed regulations will result in critical safety improvements, and we hope that they will spark a robust dialogue moving forward about pipeline safety in the United States," Dominguez said of the long-delayed rule.

PHMSA has come under fire for high-profile pipeline spills this year, including the 101,000 gallon spill of crude oil on the coast of California in May, and a 30,000 gallon spill into the Yellowstone River in January.

Lawmakers have criticized the agency for its slow implementation of 42 congressional mandates under the 2011 Pipeline Safety, Regulatory Certainty and Job Creation Act, which were supposed to be finished by 2013. The agency, which faces reauthorization this year, has completed 26 of the mandates.

Sen. Deb Fischer, R-Neb., chairman of the Surface Transportation and Merchant Marine Infrastructure, Safety, and Security Subcommittee, made it clear she wants to see more progress.

"To date, they have completed well over 50 percent of those mandates, but still have a significant amount to accomplish," Fischer said.

Sen. Jon Tester, D-Mont., who testified at the hearing, said the agency needed to show "who's driving the bus" when it comes to pipelines, and to do so by catching up on the backlog.

Dominguez said that the new regulations would help put to rest a number of those remaining mandates. In addition, she has ordered an organizational assessment of the agency, hoping to "optimize" regulations and enforcement authorities, and is implementing an Agency Safety Action Plan to improve coordination with state governments and identify opportunities for better performance.

"It's asking the question, how can we better leverage our current authorities and our capabilities to improve safety," she said of the plan.

The hearing also afforded representatives of the oil and gas pipeline industry a chance to voice their concerns with the agency.

Phillips 66 President Todd Denton said the industry needs more certainty in how inspections are conducted nationwide.

"We'd like to see a little more consistency among the inspectors," Denton said. "They just have different focuses, so sometimes there's a little bit of inconsistency there."

He also said he wanted a quicker turnaround for inspection results and a transition to "performance-based" regulations and inspections in the agency, rather than mandates.

Dominguez said a recent boost in funding from Congress and subsequent hiring should allow for improved inspection turnaround and more consistency.

But while she said the agency is looking to move toward more performance-based standards, she defended the need for a strong safety baseline through "minimum" federal standards.

"Moving forward, the industry has taken a leadership role, and I greatly appreciate it, and I'm challenging them in an even greater direction on safety management systems and safety management culture," she said.

Dominguez also faced questions on the long-stalled Keystone XL pipeline.

"How would the Keystone pipeline impact Yellowstone County, Montana, as you see it, should we be allowed to construct it?" Sen. Steve Daines, R-Mont., asked.

Dominguez, whose agency has no control over the approval process, said PHMSA would keep a close eye on the project in its early stages, should President Barack Obama's administration approve it.

"It's a very vulnerable time for a pipeline, the construction, the first few years of operation. It requires a lot of monitoring, and it requires a lot of inspection," she said.

Quick Links

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Upcoming Events

EPA: VW violated clean air standards on purpose, must fix cars

By Matthew Daly

WASHINGTON (AP) — The Environmental Protection Agency said Friday that Volkswagen intentionally skirted clean air laws by using a piece of software that enabled about 500,000 of its diesel cars to emit fewer smog-causing pollutants during testing than in real-world driving conditions.

The agency ordered VW to fix the cars at its own expense. The German automaker also faces billions of dollars in fines, although exact amounts were not determined.

The cars, all built in the last seven years, are the VW Jetta, Beetle, Golf and Passat models, as well as the Audi A3. The vehicles all contain a device programmed to detect when they are undergoing official emissions testing, the EPA said, adding that the cars only turn on full emissions control systems during that testing. The controls are turned off during normal driving situations, the EPA said.

The EPA called the company's use of the so-called "defeat device" illegal and a threat to public health.

More

Environmentalists challenging some of West's largest mines

By Colleen Slevin

DENVER (AP) — Boosted by a recent victory in Colorado, an environmental group is expanding its legal campaign to try stop coal mining because of climate change by challenging permits for some of the largest mines in the West.

This time, New Mexico-based WildEarth Guardians is asking that a federal judge block mining at the Antelope Mine and Black Thunder mines in Wyoming's Powder River Basin, the El Segundo Mine in New Mexico and the Bowie No. 2 Mine in Colorado.

But it's taking the argument further. Rather than just saying that federal regulators should take the climate change impacts of individual mines into account before approving permits, the group claims that they should be looking at the cumulative effect of mining as a whole and whether the nation should allow any more.

In May, WildEarth Guardians persuaded a Denver federal judge to order a new environmental review for the Colowyo mine in northwestern Colorado in part because Judge R. Brooke Jackson thought regulators essentially rubber stamped its permit rather than taking a serious look at the environmental impacts under federal law, including the effect burning the mined coal would have on greenhouse gases. While that mine supplied coal to a nearby power plant, the mines targeted now are owned by some of the biggest players in the struggling coal business and export coal abroad as well as provide fuel to utilities across the country.

More

GOP lawmaker vows to boycott pope's speech to Congress

By Matthew Daly

WASHINGTON (AP) — A Republican lawmaker said he will boycott Pope Francis' speech to Congress next week because of the possibility the pontiff will discuss his support for policies to fight climate change.

Three-term Rep. Paul Gosar of Arizona said that as a Catholic, he initially was excited to learn of the pope's visit to Washington and his address to Congress. But Gosar said he

decided not to attend after he read media reports that the pope plans to devote much of the speech to advocating for what Gosar calls "flawed climate change policies."

In a column Thursday on the conservative website townhall.com, Gosar wrote that he was appalled by a papal teaching document that "condemned anyone skeptical of the link between human activity and climate change." He said that if the Pope stuck to standard Christian theology or spoke out with moral authority against violent Islam, "I would be there cheering him on."

If the pope "urged the Western nations to rescue persecuted Christians in the Middle East, I would back him wholeheartedly," Gosar added. "But when the pope chooses to act and talk like a leftist politician, then he can expect to be treated like one."

More

Researchers find heavy metals along river after mine spill

By Dan Elliott

DENVER (AP) — Researchers say they found scattered accumulations of heavy metals along a 60-mile stretch of riverbank in Colorado and New Mexico a month after the Gold King Mine wastewater spill and say that any potential threat to crops and livestock should be studied further.

David Weindorf of Texas Tech University and Kevin Lombard of New Mexico State University said they found patches of discolored sludge containing elevated levels of iron, copper, zinc, arsenic and lead along the Animas River from around Farmington, New Mexico, to just north of Durango, Colorado.

The concentrations of those metals were higher than at other sites they tested on the riverbank and on nearby irrigated and non-irrigated land, Weindorf said.

None of the high readings was found in ditches that carry irrigation water to crops, Weindorf said. Irrigation systems along the Animas were closed before the mustard-colored plume of tainted wastewater drifted downstream after the Aug. 5 blowout at the Gold King in southwestern Colorado.

More

Change-of-plea hearing set Oct. 20 in deadly platform fire

By Kevin McGill

NEW ORLEANS (AP) — Criminal charges filed recently against a Houston company over a 2012 offshore oil platform fire that killed three workers appear headed for resolution.

Neither federal prosecutors nor defense lawyers for Black Elk Energy Operations would comment Friday on whether plea talks are underway. But a federal judge Thursday set three proceedings for the morning of Oct. 20: an initial appearance, an arraignment and then a re-arraignment listed on the docket as a change-of-plea hearing.

Black Elk was charged with six criminal counts alleging safety violations in connection with the November 2012 fire off Louisiana's coast. The charges were not brought by a grand jury. They were made in a bill of information filed by prosecutors — typically a sign that a defendant is cooperating.

A message from the American Petroleum Institute

America is now the world's #1 natural gas producer and will soon be #1 in oil. Now more than ever, abundant energy means abundant prosperity, opportunity and security for all Americans.

Learn more at EnergyTomorrow.org

East Arkansas power plant brought down in implosions

HELENA-WEST HELENA, Ark. (AP) — A 51-year-old power plant in Arkansas was brought down in a series of implosions as Entergy Arkansas moves forward with more modern electricity-generating facilities.

The demolition was finished Thursday at the Robert E. Ritchie power plant in Helena-West Helena, a city in the Mississippi Delta region about 70 miles southwest of Memphis, Tennessee.

The plant's boiler and a 450-foot emissions stack were safely brought to the ground on Thursday.

The plant was built in the 1960s and utility spokesman David Lewis says the plant was officially retired in 2013.

More

Zion Park names California, Nevada hikers killed in flooding

By The Associated Press

ZION NATIONAL PARK, Utah (AP) — Hours after rescuers traversed a 100-foot drop into a rugged Utah area to find the seventh victim of a flash flood, Zion National Park officials released the names of all those killed.

The hikers — six from California and one from Nevada — died when fast-moving floodwaters rushed through a narrow park canyon Monday afternoon.

Late Thursday night, the park listed the California fatalities as Mark MacKenzie, 56, of Valencia; Linda Arthur, 57, and Steve Authur, 58, both of Camarillo; Gary Favela, 51, of Rancho Cucamonga; Muku Reynolds, 59, of Chino; and Robin Brum, 53, of Camarillo. The seventh flooding victim was Don Teichner, 55, of Mesquite, Nevada.

Park officials said Linda Arthur's body was found earlier Thursday a few miles from the sandstone gorge where the group got trapped during a violent rainstorm, in an area that had been unreachable previously amid fears of more flooding. The rest of the victims were found earlier this week.

More

Agency investigates deaths of 25 walrus on Alaska coast

By Dan Joling

ANCHORAGE, Alaska (AP) — The U.S. Fish and Wildlife Service said Friday it is investigating the deaths of 25 Pacific walrus found on an isolated northwest Alaska beach.

A person connected to an Air Force radar station in the remote area spotted the animals and notified the agency this week. The walrus included 12 pups, and some were missing their heads and tusks.

The cause of death has not been determined, said Fish and Wildlife Service spokeswoman Andrea Medeiros, and investigators do not want to speculate.

"We can't come to any conclusions based on a report," she said Friday. "You have to go out and investigate."

More

Guest lineups for the Sunday news shows

By The Associated Press

WASHINGTON (AP) — Guest lineups for the Sunday TV news shows:

- ABC's "This Week" — Republican presidential candidates Marco Rubio and Donald Trump; New York Mayor Bill de Blasio.
- NBC's "Meet the Press" — Republican presidential candidate John Kasich; JPMorgan Chase CEO Jamie Dimon.
- CBS' "Face the Nation" — Democratic presidential candidate Hillary Rodham Clinton; Republican presidential candidate Rand Paul.
- CNN's "State of the Union" — Kasich; Republican presidential candidate Chris Christie.
- "Fox News Sunday" — Republican presidential candidate Carly Fiorina; Cardinal Donald Wuerl, the archbishop of Washington; Rev. Thomas Rosica, a Vatican spokesman.

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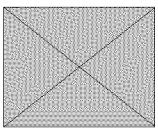

Week in Review – House Panel Moves To Lift Export Ban

Congress Gears up for Papal Visit.

Click here to read the brief

Clinton promises Keystone opinion "soon"

Campaigning in New Hampshire Thursday, Democratic presidential candidate Hillary Clinton, who's refused to offer an opinion on the Keystone XL pipeline while it's still under consideration by the Obama administration, said she's "putting the White House on notice" that she "can't wait too much longer," Politico reports.

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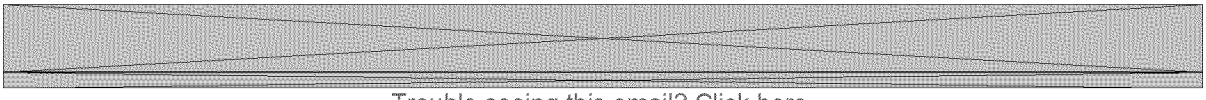

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Ex. 5, 7

Begin forwarded message:

From: "Zwart, Daniel" <daniel.zwart@texasattorneygeneral.gov>
Date: September 18, 2015 at 5:25:16 PM EDT
To: "Belser, Evan" <Belser.Evan@epa.gov>
Cc: "Kaul, Meetu" <Kaul.Meetu@epa.gov>
Subject: RE: Tex. Atty. Gen.

Of course! Later next week or thereabouts is fine. Thanks for the response. Dan

---

From: Belser, Evan [Belser.Evan@epa.gov]
Sent: Friday, September 18, 2015 4:22 PM
To: Zwart, Daniel
Cc: Kaul, Meetu
Subject: Re: Tex. Atty. Gen.

Hello Daniel and good to hear from you. I can be your point of contact for any questions concerning the VW matter. Meetu could as well but as you can imagine her plate is full. Do you mind if we waited to talk until later next week?

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 18, 2015, at 5:19 PM, Zwart, Daniel <daniel.zwart@texasattorneygeneral.gov> wrote:

Ms. Kaul:

I saw your name listed in the EPA's latest NOV. I would like to introduce myself via email. Your colleague Evan Belser and I have talked a few times in the past. Would we be able to talk on the phone sometime?

Dan Zwart
Assistant Attorney General
713-225-8921

To: OAR-OTAQ[OAROTAQ@epa.gov]
From: Grundler, Christopher
Sent: Fri 9/18/2015 9:38:02 PM
Subject: OTAQ In the News

Dear Colleagues,

One of our most important responsibilities is to keep our promises to the public, and secure the benefits of our emission standards. That means making sure everyone plays by the same set of rules, and that mobile source products meet our stringent emissions standards. Today we notified VW that they violated both of these important principles. I encourage you to read the Notice of Violation on our website that describes the facts of this case. I am sure you will be as baffled by this as I am---it is incomprehensible to me that the largest or second largest automaker in the world would act in such a way, and then conceal facts about how their products operate in the real world from both EPA and California. Kudos to our partners in California for taking the lead on the testing, and to Byron and his team's persistent search for the truth about these cars, and being steadfast in refusing to issue certificates until they got the answer. Unfortunately, the answer turned out to be that VW installed software that was designed to defeat our emission standards.

Here is the press release, our website, and a few key articles that came out today.

Thanks for what you do.

Chris

Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

Agency says German auto maker circumvented air-pollution standards with software

By AMY HARDER

WASHINGTON—The U.S. Environmental Protection Agency issued a notice on Friday alleging that Volkswagen AG circumvented air-pollution standards with software installed on nearly a half million cars sold in the U.S. since 2008.

Officials said Volkswagen could face penalties of up to $37,500 per vehicle, or a total of more than $18 billion, though it remained unclear whether the government would eventually levy such a large penalty. Officials said the German auto maker violated the federal Clean Air Act.

The agency said that owners of these cars don't need to take any action right now and that while the cars have emissions exceeding federal standards, "these violations do not present a safety hazard and the cars remain legal to drive," according to the EPA.

Officials said a recall hasn't been announced and an investigation continues. They plan to at some point order Volkswagen to fix the vehicles, officials said.

Top EPA officials made the announcement alongside the California Air Resources Board, which is separately investigating the alleged use of the software, which EPA describes as a "defeat device." The software reduces the effectiveness of a car's emission control system during normal driving conditions and enables the car to emit nitrogen oxides at up to 40 times the allowable standard, according to the EPA.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance at the EPA.

"Volkswagen Group of America Inc., Volkswagen AG and Audi AG received today notice from

the U.S. Environmental Protection Agency, U.S. Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen said in a statement. "VW is cooperating with the investigation; we are unable to comment further at this time."

EPA said that its allegations cover roughly 482,000 diesel passenger cars with model years between 2009 and 2015 and sold in the U.S. since 2008. They include the following models: the Jetta, Beetle, Audi A3, Golf and Passat.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the "defeat device" software, Volkswagen was violating two parts of the Clean Air Act.

Detroit News:

http://www.detroitnews.com/story/business/autos/foreign/2015/09/18/epa-vw-diesel-vehicles-violated-emissions-rules/72401296/

EPA: 482K VW diesel vehicles violated emissions rules

David Shepardson

Washington — The Environmental Protection Agency and the state of California said Volkswagen AG violated federal law by allowing 482,000 diesel VW and Audi cars sold since 2009 to evade emissions requirements using sophisticated software.

The announcement is a big setback to the German automaker that has made diesel vehicles a big part of its U.S. strategy. VW could face fines or criminal prosecution and must immediately prevent those vehicles from being able to defeat emissions rules.

VW concealed facts but has now admitted wrongdoing, said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "We expected better

from VW," she said.

The agencies allege that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air pollutants. California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board have initiated investigations based on Volkswagen's alleged actions.

EPA said the vehicles software "detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test." The vehicles include diesel Golf, Jetta, Sportwagen, Beetle and Audi A3 vehicles built from 2009-2015.

EPA said "the effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a 'defeat device,' as defined by the Clean Air Act."

NOx pollution contributes to nitrogen dioxide, ground-level ozone, and fine particulate matter. EPA said exposure has been linked to serious health issues, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. "Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, the elderly, and people with pre-existing respiratory disease are particularly at risk for health effects of these pollutants," EPA said.

This is the latest example of automakers not following the miles per gallon and emissions rules.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Giles. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said Air Resources Board Executive Officer Richard Corey. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The issue first came to the attention of the agencies in 2014 after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels, and the agencies began further investigations into the issue.

In September, after EPA and CARB demanded an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices, the agencies said.

EPA said VW must recall the vehicles. EPA said "owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

-

-

To: Belser, Evan[Belser.Evan@epa.gov]
From: Ex. 6
Sent: Fri 9/18/2015 9:41:02 PM
Subject: VW Debacle

Hey, Evan,
I just read about the VW defeat device case you guys are handling, and I thought I'd drop a line. It is unreal that VW could be so brazen to install all those units. Anyhow, I hope this is a super fun case for you guys and that you hit VW hard.

Ex. 6

© INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

POLICY UPDATE

JANUARY 2014

CHINA V GASOLINE AND DIESEL FUEL QUALITY STANDARDS

ICCT **POLICY UPDATES** SUMMARIZE REGULATORY AND OTHER DEVELOPMENTS RELATED TO CLEAN TRANSPORTATION WORLDWIDE.

In February 2013, China's State Council called for nationwide desulfurization of gasoline and diesel fuel to a maximum sulfur content of 10 parts-per-million (ppm) by the end of 2017.[1] Over the course of the remainder of 2013, regulatory agencies in China translated the State Council's directive into formal regulatory language. Ultimately, three new standards were issued: China IV diesel (50 ppm) in February 2013, China V diesel (10 ppm) in June 2013, and China V gasoline (10 ppm) in December 2013. Together, these standards lay out a roadmap for improving China's nationwide fuel to world-class quality. The improved fuel will reduce emissions from all motor vehicles while enabling advanced emission control technologies to be deployed, yielding critical reductions in the air pollution impacts from China's vehicle fleet.

This policy update summarizes the historical and future timelines for China's nationwide fuel quality improvement, including comparison with corresponding vehicle emission standard implementation, reviews the key changes made in each of the recently issued standards, introduces the fiscal policy measures China has announced to encourage the supply of these higher quality fuels, and compares China's standards with multiple international precedents.

SUMMARY OF NATIONWIDE TIMELINES

The following tables summarize the history and future of China's nationwide fuel quality improvement. Note that these tables show nationwide standards only; some sub-national municipalities and provinces have implemented their own fuel quality standards or will adopt national standards in advance of the nationwide timeline.[2]

icct
THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

1 Original announcement available online at: http://www.gov.cn/ldhd/2013-02/06/content_2328473.htm; summarized in March 2013 ICCT policy update here: http://www.theicct.org/breakthrough-timeline-china-ulsf-standards

2 Beijing already has 10 ppm sulfur content gasoline and diesel supply, while Shanghai has 10 ppm sulfur gasoline only. Other regions, including the greater Beijing, greater Shanghai, and Pearl River Delta regions, are required to implement 10 ppm gasoline and diesel standards by the end of 2015, two years ahead of the nationwide deadlines.

VW FOIA, EPA 06/20/2017 2017-FFP_024347

China gasoline fuel quality roadmap

Stage	Standard	Maximum sulfur level (ppm)	Date standard issued	Date standard implemented
China I	GB 17930-1999	lead-free requirement	28 Dec 1999	1 Jan 2000
China II	GB 17930-1999 (revised)[3]	500	2 Dec 2004	1 Jul 2005
China III	GB 17930-2006	150	6 Dec 2006	31 Dec 2009
China IV	GB 17930-2011	50	12 May 2011	Phased-in by 31 Dec 2013
China V	GB 17930-2013	10	18 Dec 2013	Phased-in by 31 Dec 2017

China diesel fuel quality roadmap

Stage	Standard	Maximum sulfur level (ppm)	Date standard issued	Date standard implemented
China I	GB 252-2000	2000	27 Oct 2000	1 Jan 2002
China II	GB/T 19147-2003	500 (voluntary)	23 May 2003	1 Oct 2003
China III	GB 19147-2009	350	12 Jun 2009	Phased-in 1 Jan 2010 – 1 Jul 2011
China IV	GB 19147-2013	50	7 Feb 2013	Phased-in by 31 Dec 2014
China V	GB 19147-2013	10	8 Jun 2013	Phased-in by 31 Dec 2017

A comparison of the timelines for implementation of China's nationwide fuel quality standards with motor vehicle tailpipe emission standards is shown below. Note the occasional "mismatch" between fuel quality and corresponding vehicle emission standards.

	Gasoline		Diesel	
Stage	Fuel quality	Light-duty vehicle emissions	Fuel quality	Heavy-duty vehicle emissions
I	1 Jan 2000	1 Jul 2000	1 Jan 2002	1 Sep 2001
II	1 Jul 2005	1 Jul 2005	1 Oct 2003	1 Sep 2004
III	1 Jan 2010	1 Jul 2008	1 Jul 2011	1 Jan 2008
IV	1 Jan 2014	1 Jul 2013	1 Jan 2015	1 Jul 2013[4]
V	1 Jan 2018	1 Jan 2018	1 Jan 2018	TBD[5]

Notes: Nationwide implementation dates shown. Vehicle dates shown are dates for all vehicle sales and registrations; in most cases the implementation date for new vehicle type approvals are earlier.

3 Revision announcement available online at: http://www.caam.org.cn/guojiabiaozhui/20110513/1005055894.html

4 This date represents a 30-month delay from the original intended implementation date of 1 Jan 2011.

5 The original standard was issued with an implementation date of 1 Jan 2013, but the implementation has been delayed indefinitely.

VW FOIA, EPA 06/20/2017 2017-FFP_024348

OVERVIEW OF CHANGES

GASOLINE

The following table summarizes the changes made in the progression from China III to China V gasoline standards. Besides the sulfur reductions, notable changes include the reduction in maximum permitted manganese levels and reductions in minimum octane requirements.

Parameter	Change from China III à China IV	Change from China IV à China V
Sulfur content (ppm)	Reduced 150 à 50	Reduced 50 à 10
Manganese limit (mg/l)	Reduced 16 à 8	Reduced 8 à 2
Olefin content	Reduced 30% à 28%	Reduced 28% à 24%
Summer RVP (kPa)	Upper limit reduced from 72 à 68; lower limit of 40 added	Upper limit reduced from 68 à 65; also, requirement added that southern provinces Guangdong, Guangxi, and Hainan must comply with summer RVP limits year round
Winter RVP (kPa)	Upper limit reduced from 88 à 85; lower limit of 42 added	Lower limit increased 42 à 45
Octane (RON)	No change	Minimum RON levels decreased 90/93/97 à 89/92/95; also 98 RON standard added
Density (kg/m^3)	N/A	New requirement of 720~775 at 20°C

DIESEL

The changes made in the progression from China III to V for diesel are shown below. Besides sulfur reductions, the only changes were to the cetane number requirements.

Parameter	Change from China III à China IV	Change from China IV à China V		
Sulfur content (ppm)	Reduced 350 à 50	Reduced 50 à 10		
Cetane number	No change	#5, #0, #-10	#-20	#-20, #-35, #-50
		Increased 49 à 51	Increased 46 à 49	Increased 45 à 47

VW FOIA, EPA 06/20/2017 2017-FFP_024349

ACCOMPANYING FISCAL POLICY

China's fuel prices are fixed by the National Development and Reform Commission (NDRC). In September 2013, the NDRC announced new price increases for higher quality fuels, raising the prices of China IV gasoline and diesel by 290 and 370 RMB/ton ($48 and $61/ton), respectively, and raising the prices of China V gasoline and diesel by an additional 170 and 160 RMB/ton ($28 and $26/ton), respectively. The total price increase from China III to China V is equivalent to approximately 5-6% of the existing fuel prices for gasoline and diesel.[6] The new pricing changes are designed to encourage and assist China's refineries to meet the State Council fuel quality improvement timeline. The NDRC's announcement, which also emphasized the importance of and mechanisms for ensuring compliance and enforcement of fuel quality, further underscores the Chinese government's commitment to ensuring the fuel quality timeline is met and commensurate air quality improvements are achieved.

COMPARISON WITH INTERNATIONAL STANDARDS

China's fuel quality standards mostly – but not entirely – follow European precedent. The following tables provide detailed comparisons of China's recent nationwide fuel quality parameters with those of Europe, the United States, and the Worldwide Fuel Charter.

6 More context and analysis available in an ICCT September 2013 blog post: http://www.theicct.org/blogs/staff/contextualizing-chinas-fuel-pricing-announcement

VW FOIA, EPA 06/20/2017 2017-FFP_024350

Selected gasoline parameters

Fuel Property	China III	China IV	China V	India Bharat Stage III	India Bharat Stage IV	Euro III 98/70/EC	Euro IV 2003/17/EC	Euro V 2009/30/EC	EPA RFG average (2005)[1]		EPA conventional gasoline average (2005)[2]		Worldwide Fuel Charter Category 4[3]
									Summer	Winter	Summer	Winter	
Research Octane (RON), min.	97-90	97-90	95-88	91	91	95–91	95–91	95–91	NS				91–95–98
Motor Octane (MON), min.	88-85	88-85	90-84	81	81	85–81	85–81	85–81	NS				82.5–85–88
Anti-Knock Index (AKI), min.	NS	NS	NS	NS	NS	NS	NS	NS	Recommended: 87–87–91 with seasonal and altitudinal variations ASTM D4814				NS
Aromatics, vol%, max.	40	40	40	42	35	42	35	35	20.7[4]	19.5[4]	27.7	24.7	35
Olefin, vol%, max.	30	28	24	21	21	18	18	18	11.9	9.2	12	11.6	10
Benzene, vol%, max.	1	1	1	1	1	1	1	1	0.66[5]	0.66[5]	1.21[5]	1.15[5]	1
Sulfur, ppm, max.	150	50	10	150	50	150	50	10	71[6]	81[6]	106[6]	97[6]	10
Gum Content, mg/100ml, max.	5	5	5	4	4	NS	NS	5	5				5
Density 15C, kg/m³	N/A	N/A	720-775 (20°C)	720–775	720–775	NS	NS	720–775	NS	NS	NS	NS	715–770
RVP, kPa	88 Winter (Nov-April) 72 Summer (May-Oct) max.	42-85 Winter 40-68 Summer max.	45-85 Winter 40-65[7] Summer max.	60	60	60/70 max.	60/70 max	60/70 max.	47.6[8] (6.91 psi) max.	82 (11.89 psi) max.	57.2[8] (8.3 psi)	83.6 (12.12 psi)	Temp > 15°C: 45–60 15°C>=T>5°C: 55–70 5°C>=T> -5°C: 65–80 -5°C>=T>-15°C: 75–90 Temp < -15°C : 85–105
Lead, mg/l, max.	5	5	5	5	5	5	5	5	13				NS
Manganese, mg/liter, max.	16	8	2	NS	NS	NS	NS	MMT<6 (by 2011) MMT<2 (by 2014)	NA[9]	NA[9]	NA	NA	ND
Oxygen, % m/m	2.7 (max.)	2.7 (max.)	2.7 (max.)	2.7	2.7	2.7 (max.)	2.7 (max.)	2.7 (max.)	2.40	2.37	0.95	1.08	2.7

NS = Not specified; NA = Not available; ND = Nondetectable; NAP = Not applicable

Notes:

1. National average of the 2005 RFG survey data are shown here. Even though the EPA establishes limits on sulfur, summer RVP, aromatics, and benzene for reformulated gasoline (RFG), compliance is determined based on the complex model estimates of VOC, toxic substances, and NOx emissions relative to the emissions of the 1990 baseline gasoline
2. Presented here are national averages in 2005 based on conventional gasoline survey data. The EPA sets limits on benzene and sulfur content as well as summer RVP but not for other parameters. Individual producer or importer demonstrates compliance with the conventional gasoline standard by showing that emissions of VOC, CO, NOx, and toxic air pollutants from conventional gasoline produced or imported do not increase over levels from the gasoline it produces or imports in 1990. If a producer or importer is unable to develop adequate 1990 data, it must use a "statutory baseline," which is the average quality of all 1990 U.S. gasoline
3. Applicable to markets requiring Euro 4, Euro 5 Heavy-Duty, U.S. EPA Tier 2 or 2007/2010 Heavy-Duty On-Highway, or equivalent emission standards
4. The reformulated gas provision of the Clean Air Act limits the aromatic content of RFG to 25 percent by volume
5. The Clean Air Act limits benzene content of RFG gasoline to 1 percent by volume; the Mobile Source Air Toxics final rule further tightens the benzene limit to 0.62 percent for all gasoline (reformulated and conventional) on an annual average basis beginning January 1, 2011. While the 0.62 percent limits could be met through an averaging, banking, and trading program, the actual annual average of gasoline produced or imported by any refiner or importer must not exceed 1.3 percent by volume, beginning July 1, 2012
6. Effective from 2006, the gasoline sulfur limit for all gasoline is 30 ppm for the annual refinery average and a cap of 80 ppm for all production
7. Guangdong, Guangxi, and Hainan must comply with summer RVP limits year round
8. Clean Air Act specifies a limit of 62.1 kPa (9 psi) for any gasoline sold during the high ozone season (Jun. 1 to Sept. 15). More stringent volatility (summer RVP) requirements are set for RFG, which vary by the region and month, and range from 48.3-62.1 kPa (7-9 psi). EPA provides a 1.0-psi RVP allowance for gasoline containing ethanol at 9 to 10 volume percent.
9. Clean Air Act requires that RFG to contain no heavy metal, including lead and manganese.

VW FOIA, EPA 06/20/2017 2017-FFP_024351

Selected diesel parameters

Fuel Property	China III	China IV	China V	India Bharat Stage II	India Bharat Stage III	India Bharat Stage IV	Euro III	Euro IV	Euro V	EPA	CARB		Worldwide Fuel Charter Category 4[2]
										Conventional diesel	Reference fuel[1]	Designated equivalent limit[1]	
Polyaromatics, vol%, max.	11	11	11	-	11	11	11	11	8	NS	1.4	3.5	2
Sulfur, ppm, max.	350	50	10	500	350	50	350	50	10	15	15	15	10
Cetane number, min.	49	49	51	48	51	51	51	51	51	Cetane index >= 40 or aromatics <= 35%[3]	48	53	55
Density 15°C, kg/m³, min.	810-850 (20°C)	810-850 (20°C)	810-850 (20°C)	820–860	820–845	820–845	820–845	845	845	NS	NS	NS	820[4]
Flash point, Abel, °C, min.	55	55	55	35	35	35	55	55	55	NS	54	NS	55
Ash content, % m/m, max.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	NS	NS	NS	0.001
Viscosity 40°C, mm²/s	3.0-8.0	3.0-8.0	3.0-8.0	2.0–5.0	2.0–5.0	2.0–4.5	2.0–4.5	2.0–4.5	2.0–4.5	NS	2.0–4.1	NS	2.0[5]

PP = Diesel pour point; NS=Not specified

Notes:

1. The California regulations allow flexibility in meeting the limit on aromatics. Producers or importers could either produce a fuel that meets the designated equivalent limits or certify a fuel formulation by demonstrating that the exhaust emission reduction of a candidate fuel is equivalent to those with the reference fuel; the "low-emission" fuels typically have a much higher cetane number and lower sulfur but higher aromatics, higher polycyclic aromatics, and higher nitrogen than the reference fuel
2. Applicable to markets requiring Euro 4, Euro 5 Heavy-Duty, U.S. EPA Tier 2 or 2007/2010 Heavy-Duty On-Highway, or equivalent emission standards
3. The EPA requires either a minimum cetane index of 40 or a maximum aromatic content of 35 percent. Premium diesel fuel defined by the National Institute of Standards and Technology (NIST) requires a minimum cetane number of 47.0. It is up to individual states to adopt the NIST premium diesel requirements
4. Can be relaxed to 800 kg/m3 when ambient temperatures are below -30°C. For environmental purposes, a minimum of 815 kg/m3 can be adopted
5. Can be relaxed to 1.5 mm2/s when ambient temperatures are below -30°C and to 1.3 mm2/s when ambient temperatures are below -40°C

VW FOIA, EPA 06/20/2017 2017-FFP_024352

To: Purchia, Liz[Purchia.Liz@epa.gov]
Cc: Reynolds, Thomas[Reynolds.Thomas@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Allen, Laura[Allen.Laura@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Grundler, Christopher
Sent: Fri 9/18/2015 9:48:06 PM
Subject: Re: New NYT headline

I give up

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 18, 2015, at 5:02 PM, Purchia, Liz <Purchia.Liz@epa.gov> wrote:

VW Is Said to Cheat on Diesel Emissions; U.S. Orders Big Recall

Liz Purchia

Deputy Associate Administrator, Public Affairs

U.S. Environmental Protection Agency

Office: 202-564-6691

Cell: 202-841-2230

To: Redacted
From: Belser, Evan
Sent: Fri 9/18/2015 9:58:25 PM
Subject: Re: VW Debacle

Thanks Redacted I'm glad you appreciate the effort. Hope you're doing well.

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

> On Sep 18, 2015, at 5:41 PM, Redacted wrote:
>
> Hey, Evan,
>
> I just read about the VW defeat device case you guys are handling, and I thought I'd drop a line. It is unreal that VW could be so brazen to install all those units. Anyhow, I hope this is a super fun case for you guys and that you hit VW hard.
>
> Redacted

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Shepardson, David
Sent: Fri 9/18/2015 10:04:50 PM
Subject: Re: gen 1 and Gen 2

Not many but some apparently

Sent from my iPhone

> On Sep 18, 2015, at 5:56 PM, "Grundler, Christopher" <grundler.christopher@epa.gov> wrote:
>
> Interesting. That's news
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)
>
>> On Sep 18, 2015, at 5:55 PM, Shepardson, David <DShepardson@detroitnews.com> wrote:
>>
>> VW told me there are some 2015 models still in showrooms
>>
>> Sent from my iPhone
>>
>>> On Sep 18, 2015, at 5:53 PM, "Grundler, Christopher" <grundler.christopher@epa.gov> wrote:
>>>
>>> Gen 1: 338,447 sales 2009-2014
>>> Gen 2: 73,171 sales Passat 2013-14
>>> Gen 3: 69,734 projected sales 2015 all models
>>>
>>> Christopher Grundler, Director
>>> Office of Transportation and Air Quality
>>> U.S. EPA
>>> 202-564-1682 (DC)
>>> 734-214-4207 (Ann Arbor)

To: McCabe, Janet[McCabe.Janet@epa.gov]
From: Grundler, Christopher
Sent: Fri 9/18/2015 10:18:05 PM
Subject: Fwd: Defeat device history - 1972

Fyi !

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Begin forwarded message:

From: "Bunker, Byron" <bunker.byron@epa.gov>
Date: September 18, 2015 at 3:52:01 PM EDT
To: "Grundler, Christopher" <grundler.christopher@epa.gov>
Cc: "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Millett, John" <Millett.John@epa.gov>
Subject: Defeat device history - 1972

https://news.google.com/newspapers?nid=1755&dat=19721216&id=Fkg0AAAAIBAJ&sjid=nmYEAAAAIB

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Bunker, Byron[bunker.byron@epa.gov]; Kirshenblatt,Morrie [NCR][Morrie.Kirshenblatt@ec.gc.ca]
From: Couroux,Stephane [NCR]
Sent: Fri 9/18/2015 11:13:37 PM
Subject: Re: EPA VW announcement is now live

Hi Byron, turned out to be a busy day in Ottawa. No worries for missing call yesterday as today's announcement is a definite example of why we are doing this work. Looking forward to our next call. Stéphane.

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Friday, September 18, 2015 12:38 PM Eastern Standard Time
To: Couroux,Stephane [NCR]; Kirshenblatt,Morrie [NCR]
Subject: EPA VW announcement is now live

Hi Stephane and Morrie,

Our VW announcement is live. You can find it here.

http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/dfc8e33b5ab162b985257ec40

http://www3.epa.gov/otaq/cert/violations.htm

We didn't get any questions on Canadian vehicles during the press call.

Thanks for everything yesterday. I am sorry that I couldn't stay for the entire call. Those meetings are very important to me, and we truly appreciate our collaboration.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Couroux,Stephane [NCR][Stephane.Couroux@ec.gc.ca]
From: Bunker, Byron
Sent: Fri 9/18/2015 11:18:16 PM
Subject: Re: EPA VW announcement is now live

Thanks Stephane,

I hope that interesting means good. Have a great weekend.

Byron

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283
Ex. 6

Sent from my cell phone.

On Sep 18, 2015, at 7:13 PM, Couroux,Stephane [NCR] <Stephane.Couroux@ec.gc.ca> wrote:

> Hi Byron, turned out to be a busy day in Ottawa. No worries for missing call yesterday as today's announcement is a definite example of why we are doing this work. Looking forward to our next call. Stéphane.
>
> **From**: Bunker, Byron [mailto:bunker.byron@epa.gov]
> **Sent**: Friday, September 18, 2015 12:38 PM Eastern Standard Time
> **To**: Couroux,Stephane [NCR]; Kirshenblatt,Morrie [NCR]
> **Subject**: EPA VW announcement is now live
>
> Hi Stephane and Morrie,
>
> Our VW announcement is live. You can find it here.
>
> http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/dfc8e33b5ab162b985257ec4
>
> http://www3.epa.gov/otaq/cert/violations.htm

We didn't get any questions on Canadian vehicles during the press call.

Thanks for everything yesterday. I am sorry that I couldn't stay for the entire call. Those meetings are very important to me, and we truly appreciate our collaboration.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Robbie Diamond
Sent: Fri 9/18/2015 11:26:18 PM
Subject: RE: In case you missed this

Poor Drew Kodjak!

Good work. It is crazy that anyone can think they can get away with that. There is no need to answer. It is just a musing.

Have a wonderful weekend. See you very soon.

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Friday, September 18, 2015 7:26 PM
To: Robbie Diamond <RDiamond@secureenergy.org>
Subject: Re: In case you missed this

This is why I had to leave breakfast early.

And no, they don't. California, however will get about 10% of any penalty to spend as they wish; 90% of any penalty goes to the Treasury to pay the interest on your savings bonds

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 18, 2015, at 7:19 PM, Robbie Diamond <RDiamond@secureenergy.org> wrote:

> I saw.

I hope ICCT gets to keep 1% of the penalty as a finders fee.

Thanks for sharing.

See you soon.

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Friday, September 18, 2015 6:18 PM
To: Robbie Diamond <RDiamond@secureenergy.org>
Subject: In case you missed this

TRANSPORTATION:

Electric cars will be the quickest way to decarbonize the U.S., says industry-enviro group report

Benjamin Hulac, E&E reporter

Published: Friday, September 18, 2015

California Gov. Jerry Brown (D) issued an executive order in April that set a goal to cut the state's greenhouse gas emissions by 40 percent by 2030 and eventually 80 percent by 2050 compared with 1990 levels.

"I don't know how you're getting anywhere close to that without electrification," Ted Craver, CEO of Edison International, the parent company of Southern California Edison Co., said in an interview with *ClimateWire* yesterday, referring to that 2050 target.

Minutes earlier, Craver helped unveil a **report** from the Electric Power Research Institute and Natural Resources Defense Council about electrifying the U.S. transportation sector.

"This research points to the importance of two fundamental and parallel trends in energy and the environment," Mike Howard, EPRI president and CEO, said in a statement. "First is the continuing decarbonization of the electricity sector and second is the electrification of energy use in transportation and industry."

The report forecasts emissions through 2050, as well as air quality impacts in 2030, analyzing the effects of a significant shift from gasoline-fueled vehicles to plug-in electric models under two different scenarios -- a baseline and a lower-emissions model.

"Widespread electrification" of light- and medium-duty vehicles, under the baseline scenario, could cut annual greenhouse emissions 45 percent by midcentury, from 2015 levels, as electric automobiles supplant their combustion engine counterparts. And the lower-emission scenario would lower emissions about 75 percent during the same period, the results read.

The report's model predicts that, by 2050, 53 percent of citizens' distance behind the wheel, measured in vehicle miles traveled, will be powered by energy from the electric grid.

"Based on current policies that require greater efficiency for new vehicles," results without broad electric car adoption would cut emissions about 25 percent from levels this year by 2050, the report concludes.

From 2003 to 2013, low natural gas prices, a rise in capacity for combined-cycle natural gas facilities, cross-state pollution rules, a drop in overhead costs for solar and wind equipment, and a tightening of environmental regulations, among other factors, have restrained both greenhouse gas and pollutant emissions from power plants.

Measured in intensity, carbon dioxide emissions dropped 15 percent, and sulfur dioxide and nitrogen oxide -- two pollutants U.S. EPA regulates -- fell about 70 and 50 percent, respectively, during that 2003-2013 time frame.

Accelerating out of a 'niche market'

"Hailing from Southern California," Craver told an audience at the National Press Club in Washington, D.C., "the air quality elements are extremely important to us." Electric cars and other transport-sector machinery must move beyond a "niche" market, he said. "Now is the call for action," he added. "We really need all of the nation to pull together."

Twenty-seven percent of U.S. greenhouse gas emissions come from the transportation sector -- second to the electricity sector, according to EPA data.

The report excluded heavier vehicles and vessels, such as boats and ships, airplanes, trains, and line-haul heavy-duty trucks, out of impracticality.

"In many ways, we were conservative from a technology point," said Mark Duvall, director of electric transportation and energy storage at EPRI. Accurately projecting the nationwide growth of the fully electric car market today seemed highly unlikely to many experts when EPRI released the first version of this report in 2007, Duvall said.

The authors did, however, examine the impact of powering work-related machines, such as forklifts and lawn mowers.

David Hawkins, director of climate programs for NRDC, said officials at his organization are confident EPA's Clean Power Plan will hold up to legal challenges, adding that the regulation is a "very important step" to correct market signals by pricing carbon.

The grid will certainly become cleaner, but whether the power sector lowers its emissions fast enough to ward off climate change's worst impacts remains an open question, he said. "This is a wave of the future that is on the road in small quantities today," Hawkins said. Electric vehicles' share of the U.S. automobile market is about 1 percent.

"We're the obvious group to really get this thing started," Craver said of utility companies, referring to encouraging growth in the EV market.

In a conversation after the report's release, Craver alluded to a new era in power generation for the nation. The utility business has been focused on power plants as the most important sections of their supply chains, he said. "Bulk power has been where all the action is," he said.

He said the most important links in utility companies' networks are shifting toward distribution. "Long term, I see a fundamental shift in how the industry is managed," he said. "Let's get in front of the parade and push this thing along."

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

Spam
Phish/Fraud
Not spam
Forget previous vote

Spam
Phish/Fraud
Not spam
Forget previous vote

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: McCabe, Janet
Sent: Fri 9/18/2015 11:27:39 PM
Subject: Re: Defeat device history - 1972

So cool--we're part of history!

Sent from my iPhone

On Sep 18, 2015, at 6:18 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

> Fyi !
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)
>
> Begin forwarded message:
>
> **From:** "Bunker, Byron" <bunker.byron@epa.gov>
> **Date:** September 18, 2015 at 3:52:01 PM EDT
> **To:** "Grundler, Christopher" <grundler.christopher@epa.gov>
> **Cc:** "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Millett, John" <Millett.John@epa.gov>
> **Subject: Defeat device history - 1972**
>
> https://news.google.com/newspapers?nid=1755&dat=19721216&id=Fkg0AAAAIBAJ&sjid=nmYEAAAA
>
> **********
>
> Byron Bunker
>
> Director Compliance Division
>
> Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

To: Stewart, Lori[Stewart.Lori@epa.gov]
From: Grundler, Christopher
Sent: Sat 9/19/2015 1:32:23 AM
Subject: Re: THANK YOU

Proud of One EPA!

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 18, 2015, at 9:29 PM, Stewart, Lori <Stewart.Lori@epa.gov> wrote:
>
> Nice message Chris. I heard the story on NPR in the way home and felt proud of OTAQ.
>
> Sent from my iPhone
>
>> On Sep 18, 2015, at 9:01 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>>
>> To Our Mighty Communications, Compliance, and Enforcement Team:
>>
>> A HUGE thank you to all of you for the amazing scramble you performed --in a very short period of time-- to pull off a successful announcement today. Not only did we give you very little notice, we also asked you to do this jointly with the State of California, integrate the interests of the program office and the enforcement office, and to please, please, not get the Justice Department excited.
>>
>> In my objective opinion, the announcement and ensuing coverage (incidentally, worldwide) came off flawlessly (with the exception of the paper of record's headline....). Our message was clearly communicated, we answered the followup questions accurately and quickly, and the public was informed in a timely and transparent way.
>>
>> Don't underestimate the long term effect of such a communications effort: this has already had an impact on this global industry. Firms are no doubt already--or certainly will by Monday--begin checking their processes and seeking assurances from their product development teams about their calibration software. This, in turn, leads to better, more durable, and cleaner products.
>>
>> Just as importantly, today we showed, again, that EPA keeps its promises. That we are serious about securing the benefits we predict and promise the public will result from our standards.
>>
>> Today's announcement was, as Tom (allegedly) told the New York Times, only the "opening salvo". We will again need your help when we communicate to the public what we've learned from this episode (i.e. what new test procedures will we institute to deter this kind of behavior in the future--stay tuned) and how we ultimately resolve this matter with Volkswagen.
>>
>> Until then, I am so proud and grateful to work with such a committed, competent, and professional group of colleagues. Please share this note with any of our colleagues I inadvertently left off the addressee list.
>>
>> A good day indeed.
>>
>> Chris
>>
>> Christopher Grundler, Director
>> Office of Transportation and Air Quality

>> U.S. EPA
>> 202-564-1682 (DC)
>> 734-214-4207 (Ann Arbor)

To: Conger, Nick[Conger.Nick@epa.gov]
From: Grundler, Christopher
Sent: Sat 9/19/2015 1:32:46 AM
Subject: Re: THANK YOU

Teamwork!

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 18, 2015, at 9:31 PM, Conger, Nick <Conger.Nick@epa.gov> wrote:

Great note. Thank you, Chris.

Sent from my Windows Phone

From: Grundler, Christopher
Sent: 9/18/2015 9:01 PM
To: Birgfeld, Erin; Millett, John; Conger, Nick; Purchia, Liz; Allen, Laura; Cohen, Janet; Suarez, Patricia; Belser, Evan; Kaul, Meetu; Wehrly, Linc
Cc: Reynolds, Thomas; McCabe, Janet; Giles-AA, Cynthia; Bunker, Byron; Cook, Leila; Hengst, Benjamin; Stewart, Lori
Subject: THANK YOU

To Our Mighty Communications, Compliance, and Enforcement Team:

A HUGE thank you to all of you for the amazing scramble you performed --in a very short period of time-- to pull off a successful announcement today. Not only did we give you very little notice, we also asked you to do this jointly with the State of California, integrate the interests of the program office and the enforcement office, and to please, please, not get the Justice Department excited.

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A good day indeed.

Chris

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Conger, Nick
Sent: Sat 9/19/2015 1:41:41 AM
Subject: RE: THANK YOU

I did not know that. A distinguished alum indeed!

Sent from my Windows Phone

From: Grundler, Christopher
Sent: 9/18/2015 9:33 PM
To: Conger, Nick
Subject: Re: THANK YOU

Don't know if you know this but I am an old OECA alum.....

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 18, 2015, at 9:31 PM, Conger, Nick <Conger.Nick@epa.gov> wrote:

> Great note. Thank you, Chris.
>
> Sent from my Windows Phone
>
> ---
>
> **From:** Grundler, Christopher
> **Sent:** 9/18/2015 9:01 PM
> **To:** Birgfeld, Erin; Millett, John; Conger, Nick; Purchia, Liz; Allen, Laura; Cohen, Janet; Suarez, Patricia; Belser, Evan; Kaul, Meetu; Wehrly, Linc
> **Cc:** Reynolds, Thomas; McCabe, Janet; Giles-AA, Cynthia; Bunker, Byron; Cook, Leila; Hengst, Benjamin; Stewart, Lori
> **Subject:** THANK YOU
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A good day indeed.

Chris

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Grundler, Christopher
Sent: Sat 9/19/2015 1:49:13 AM
Subject: VW cheated on U.S. pollution tests for 'clean diesels' - LA Times

Good story by Jerry

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Allen, Laura
Sent: Sat 9/19/2015 2:07:15 AM
Subject: Re: THANK YOU

Yes, it sure was a great day. Happy to help

> On Sep 18, 2015, at 9:01 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> To Our Mighty Communications, Compliance, and Enforcement Team:
>
> A HUGE thank you to all of you for the amazing scramble you performed --in a very short period of time-- to pull off a successful announcement today. Not only did we give you very little notice, we also asked you to do this jointly with the State of California, integrate the interests of the program office and the enforcement office, and to please, please, not get the Justice Department excited.
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>
> Chris
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Drew Kodjak[Drew@theicct.org]
From: Grundler, Christopher
Sent: Sat 9/19/2015 12:25:37 PM
Subject: Media referrals

Yesterday in interviews I refused to speculate on what possibly could have motivated VW but am referring reporters to you in case you might be willing. Should have alerted you sooner and forgot. Sorry

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Jim Snyder
Sent: Sat 9/19/2015 1:59:31 PM
Subject: VW notice of violation
vw-nov-caa-09-18-15.pdf

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Ex. 6
Sent: Sat 9/19/2015 2:01:44 PM
Subject: Re: Google VW and EPA

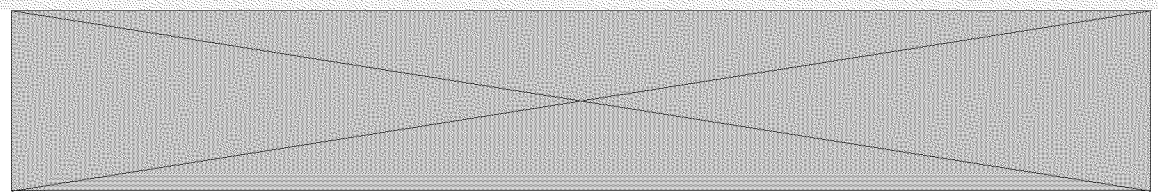
crazy, have to wonder what they were thinking.

On Fri, Sep 18, 2015 at 12:58 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

> Part of what I've been working on lately in case you are curious
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

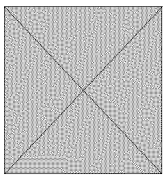
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Sat 9/19/2015 4:03:23 PM
Subject: Green Car Report Daily Headlines

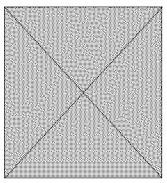
Email not displaying correctly? View it in your browser.



***Rate** your car and win an iPad.*

More ways to follow us:

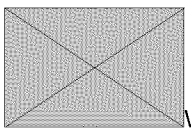




The latest from your friends at GCR:

Porsche & Audi Electric Concepts, LAPD Tesla, VW Diesel Deception: The Week In Reverse (Video)

Sep 19, 2015 12:00 pm | feedback@highgearmedia.com (John Voelcker)

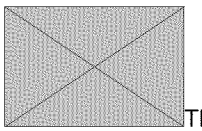


Which carmaker was charged by the EPA with creating special software to cheat for years on emissions tests? And, why is the same electric car rated at both 107 miles and 155 miles of range? This is our video look back at the Week In Reverse--right here at Green Car Reports--for the week ending on Friday, September 18, 2015. Friday, we covered a...

comments | read more

VW, Audi TDI Diesel Cars Had 'Defeat Device' That Violated EPA Rules, 500K Cars Recalled: BREAKING

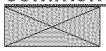
Sep 18, 2015 05:00 pm | feedback@highgearmedia.com (John Voelcker)

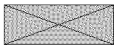


The announcement came out of the blue:

"The U.S. Environmental Protection Agency will host a media call at 12 noon EST today, Friday, September 18, to make an announcement regarding a major automaker." When it was all over, German carmakers Volkswagen and Audi had been ordered to recall half a million of its popular TDI four-cylinder diesel...

comments | read more





You are receiving this email because you subscribed to it on our website

Unsubscribe pidgeon.bill@epa.gov from this list.

Our mailing address is:
High Gear Media
830 Menlo Ave, Suite 201
Menlo Park, CA 94025

Add us to your address book

Copyright (C) 2015 High Gear Media All rights reserved.

Update your profile

.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Aaron Kessler
Sent: Sat 9/19/2015 4:40:46 PM
Subject: Re: Thanks for yesterday; but oh hell, re: headline

Chris,

It's done:
http://nyti.ms/1iC8AD6

On Sat, Sep 19, 2015 at 12:06 PM, Aaron Kessler <akesslernyt@gmail.com> wrote:

> Chris,
>
> First of all, thanks for getting on the phone yesterday - your guidance on the reason VW likely did what it did was exactly what we needed, and as you saw we were able to get others to talk about those aspects on the records per your suggestion.
>
> I'm actually with my wife down on the Chesapeake Bay this weekend, and so just noticed that after Coral and I made extra sure in our phrasing, and so we thought communicated that up the chain, looks like someone on the copy desk when they wrote the final headline last night used "orders" again. At least when I looked at the online version now, it's got that word in there. Grr.
>
> Anyway, I didn't want you to wake up this morning and think, wth? Given our conversation. When stories get chosen for the front page they go through more hands, and somehow later on it got added -- but I'm going to send a note right now to see if they can tweak the headline online to at least say "to order" or something that gets the timing accurate.
>
> Aaron

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Allen, Laura[Allen.Laura@epa.gov]; Purchia, Liz[Purchia.Liz@epa.gov]
From: Grundler, Christopher
Sent: Sat 9/19/2015 7:23:52 PM
Subject: Fwd: Thanks for yesterday; but oh hell, re: headline

Well, this is interesting. See first email

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Begin forwarded message:

From: Aaron Kessler <Ex. 6>
Date: September 19, 2015 at 12:40:46 PM EDT
To: grundler.christopher@epa.gov
Subject: Re: Thanks for yesterday; but oh hell, re: headline

Chris,

It's done:
http://nyti.ms/1iC8AD6

On Sat, Sep 19, 2015 at 12:06 PM, Aaron Kessler <Ex. 6> wrote:

Chris,

First of all, thanks for getting on the phone yesterday - your guidance on the reason VW likely did what it did was exactly what we needed, and as you saw we were able to get others to talk about those aspects on the records per your suggestion.

Ex. 6 and so just noticed that after Coral and I made extra sure in our phrasing, and so we thought communicated that up the chain, looks like someone on the copy desk when they wrote the final headline last night used "orders" again. At least when I looked at the online version now, it's got that word in there. Grr.

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they can tweak the headline online to at least say "to order" or something that gets the timing accurate.

Aaron

To: Bill Ross[bross@rossstrategic.com]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Bunker, Byron
Sent: Sun 9/20/2015 12:07:59 AM
Subject: Re: And I have a vw Jetta sports wagon!

Thanks Bill.

Byron Bunker
US EPA
NVFEL Office Phone (734) 214-4155
DC Office Phone (202) 343-9283

Ex. 6

Sent from my cell phone.

On Sep 19, 2015, at 7:25 PM, Bill Ross <bross@rossstrategic.com> wrote:

> Good work team!
>
> Sent from my iPhone

To: Bunker, Byron[bunker.byron@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
Cc: Millett, John[Millett.John@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Grundler, Christopher
Sent: Sun 9/20/2015 12:17:35 AM
Subject: VW tells U.S. dealers to halt sales of some '15 diesel cars

Check out this article from The Detroit News:

VW tells U.S. dealers to halt sales of some '15 diesel cars

http://detne.ws/1F8Gmd5

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Grundler, Christopher
Sent: Sun 9/20/2015 12:18:02 AM
Subject: VW tells U.S. dealers to halt sales of some '15 diesel cars

Ex. 5

Check out this article from The Detroit News:

VW tells U.S. dealers to halt sales of some '15 diesel cars

http://detne.ws/1F8Gmd5

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Brooks, Phillip
Sent: Sun 9/20/2015 12:21:13 AM
Subject: Re: VW tells U.S. dealers to halt sales of some '15 diesel cars

Wow!

Sent from my iPhone

> On Sep 19, 2015, at 8:17 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> Check out this article from The Detroit News:
>
> VW tells U.S. dealers to halt sales of some '15 diesel cars
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> http://detne.ws/1F8Gmd5
>
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Aaron Kessler[akesslernyt@gmail.com]
From: Grundler, Christopher
Sent: Sun 9/20/2015 12:44:48 AM
Subject: Re: Thanks for yesterday; but oh hell, re: headline

Aaron:
I really appreciate your note, and the effort. It means a lot. I apologize if I came across to you and Coral as rather impertinent--it was a stressful week.

Despite the headline, I think the story was very well done, and the ICCT quote added an important dimension. And of course, I loved the placement of the story on page one above the fold !

I'm sorry I did not reply sooner. It's Game Day in Ann Arbor and Ex. 6 and I were at the game and tailgating after. Enjoy the eastern shore --when Ex. 6 and I lived in the DC area we loved exploring the Chesapeake.

Chris

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 19, 2015, at 12:07 PM, Aaron Kessler <akesslernyt@gmail.com> wrote:
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>
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>
> Aaron

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: McCabe, Janet
Sent: Sun 9/20/2015 1:18:44 AM
Subject: Re: VW tells U.S. dealers to halt sales of some '15 diesel cars

We'll see more roll out I assume over the next weeks. Did you follow up with any other press?

Sent from my iPhone

> On Sep 19, 2015, at 8:19 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> Fyi
>
> Check out this article from The Detroit News:
>
> VW tells U.S. dealers to halt sales of some '15 diesel cars
>
> http://detne.ws/1F8Gmd5
>
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: McCabe, Janet[McCabe.Janet@epa.gov]
From: Grundler, Christopher
Sent: Sun 9/20/2015 1:20:34 AM
Subject: Re: VW tells U.S. dealers to halt sales of some '15 diesel cars

Yes; Chattanooga Times and New York Times

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 19, 2015, at 9:18 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:
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>> VW tells U.S. dealers to halt sales of some '15 diesel cars
>>
>> http://detne.ws/1F8Gmd5
>>
>>
>> Christopher Grundler, Director
>> Office of Transportation and Air Quality
>> U.S. EPA
>> 202-564-1682 (DC)
>> 734-214-4207 (Ann Arbor)

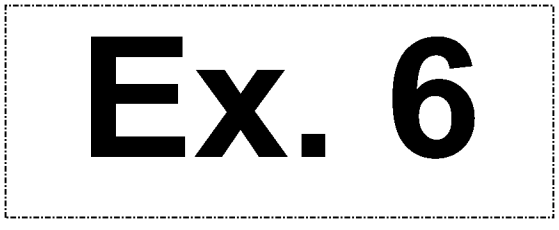
To: Bunker, Byron[bunker.byron@epa.gov]
From: Brooks, Phillip
Sent: Sun 9/20/2015 2:07:28 PM
Subject: Re: THANK YOU

Perhaps it is a message. I will watch for the Pink Slip.

Sent from my iPhone

On Sep 20, 2015, at 8:13 AM, Bunker, Byron <bunker.byron@epa.gov> wrote:

Don't know how you got dropped from this distribution list. See below and have a safe trip.



Sent from my cell phone.

Begin forwarded message:

From: "Giles-AA, Cynthia" <Giles-AA.Cynthia@epa.gov>
Date: September 20, 2015 at 8:11:36 AM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>
Cc: "Grundler, Christopher" <grundler.christopher@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>, "Purchia, Liz" <Purchia.Liz@epa.gov>, "Allen, Laura" <Allen.Laura@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>, "Suarez, Patricia" <suarez.patricia@epa.gov>, "Belser, Evan" <Belser.Evan@epa.gov>, "Kaul, Meetu" <Kaul.Meetu@epa.gov>, "Wehrly, Linc" <wehrly.linc@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>, "Bunker, Byron" <bunker.byron@epa.gov>, "Cook, Leila" <cook.leila@epa.gov>, "Hengst, Benjamin" <Hengst.Benjamin@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: Re: THANK YOU

Checking in from Bangkok to add my agreement with comments from chris and to let you know this story was above the fold front page of financial times in Hong Kong on Saturday, just to underscore the point about worldwide news. Thanks all!

Sent from my iPhone

On Sep 19, 2015, at 8:42 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:

Hear, hear!

My spouse looked at some of the comments on the NYT webpage (not generally an advisable activity), and there were some good ones, apparently including: "Can we get EPA to oversee the banking industry too?"

From: Grundler, Christopher

Sent: Friday, September 18, 2015 9:01 PM

To: Birgfeld, Erin; Millett, John; Conger, Nick; Purchia, Liz; Allen, Laura; Cohen, Janet; Suarez, Patricia; Belser, Evan; Kaul, Meetu; Wehrly, Linc

Cc: Reynolds, Thomas; McCabe, Janet; Giles-AA, Cynthia; Bunker, Byron; Cook, Leila; Hengst, Benjamin; Stewart, Lori

Subject: THANK YOU

To Our Mighty Communications, Compliance, and Enforcement Team:

A HUGE thank you to all of you for the amazing scramble you performed --in a very short period of time-- to pull off a successful announcement today. Not only did we give you very little notice, we also asked you to do this jointly with the State of California, integrate the interests of the program office and the enforcement office, and to please, please, not get the Justice Department excited.

In my objective opinion, the announcement and ensuing coverage (incidentally, worldwide) came off flawlessly (with the exception of the paper of record's headline....). Our message was clearly communicated, we answered the followup questions accurately and quickly, and the public was informed in a timely and transparent way.

Don't underestimate the long term effect of such a communications effort: this has already had an impact on this global industry. Firms are no doubt already--or

certainly will by Monday--begin checking their processes and seeking assurances from their product development teams about their calibration software. This, in turn, leads to better, more durable, and cleaner products.

Just as importantly, today we showed, again, that EPA keeps its promises. That we are serious about securing the benefits we predict and promise the public will result from our standards.

Today's announcement was, as Tom (allegedly) told the New York Times, only the "opening salvo". We will again need your help when we communicate to the public what we've learned from this episode (i.e. what new test procedures will we institute to deter this kind of behavior in the future--stay tuned) and how we ultimately resolve this matter with Volkswagen.

Until then, I am so proud and grateful to work with such a committed, competent, and professional group of colleagues. Please share this note with any of our colleagues I inadvertently left off the addressee list.

A good day indeed.

Chris

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Shepardson, David
Sent: Sun 9/20/2015 3:50:57 PM
Subject: I'm sure you saw this

http://www.detroitnews.com/story/business/autos/foreign/2015/09/20/vw-ceo-apologizes-emissions-launches-investigation/72516684/

Sent from my iPhone

To: Purchia, Liz[Purchia.Liz@epa.gov]; Reynolds, Thomas[Reynolds.Thomas@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Cohen, Janet[cohen.janet@epa.gov]; Millett, John[Millett.John@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Allen, Laura[Allen.Laura@epa.gov]; Charmley, William[charmley.william@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]
From: Grundler, Christopher
Sent: Sun 9/20/2015 3:53:05 PM
Subject: VW CEO apologizes for emissions, launches investigation

FYI

http://www.detroitnews.com/story/business/autos/foreign/2015/09/20/vw-ceo-apologizes-emissions-launches-investigation/72516684/

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Shepardson, David[DShepardson@detroitnews.com]
From: Grundler, Christopher
Sent: Sun 9/20/2015 3:53:52 PM
Subject: Re: I'm sure you saw this

Did not--Traveling to DC. Thanks for the heads up

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 20, 2015, at 11:51 AM, Shepardson, David <DShepardson@detroitnews.com> wrote:
>
> http://www.detroitnews.com/story/business/autos/foreign/2015/09/20/vw-ceo-apologizes-emissions-launches-investigation/72516684/
>
> Sent from my iPhone

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Shepardson, David
Sent: Sun 9/20/2015 3:57:15 PM
Subject: Re: I'm sure you saw this

I think Wolfsburg for finally realizes how serious this is

Sent from my iPhone

> On Sep 20, 2015, at 11:53 AM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> Did not--Traveling to DC. Thanks for the heads up
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)
>
>> On Sep 20, 2015, at 11:51 AM, Shepardson, David <DShepardson@detroitnews.com> wrote:
>>
>> http://www.detroitnews.com/story/business/autos/foreign/2015/09/20/vw-ceo-apologizes-emissions-launches-investigation/72516684/
>>
>> Sent from my iPhone

To: Shepardson, David[DShepardson@detroitnews.com]
From: Grundler, Christopher
Sent: Sun 9/20/2015 4:03:07 PM
Subject: Re: I'm sure you saw this

Good. About time

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 20, 2015, at 11:57 AM, Shepardson, David <DShepardson@detroitnews.com> wrote:
>
> I think Wolfsburg for finally realizes how serious this is
>
> Sent from my iPhone
>
>> On Sep 20, 2015, at 11:53 AM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>>
>> Did not--Traveling to DC. Thanks for the heads up
>>
>> Christopher Grundler, Director
>> Office of Transportation and Air Quality
>> U.S. EPA
>> 202-564-1682 (DC)
>> 734-214-4207 (Ann Arbor)
>>
>>> On Sep 20, 2015, at 11:51 AM, Shepardson, David <DShepardson@detroitnews.com> wrote:
>>>
>>> http://www.detroitnews.com/story/business/autos/foreign/2015/09/20/vw-ceo-apologizes-emissions-launches-investigation/72516684/
>>>
>>> Sent from my iPhone

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: McCabe, Janet
Sent: Sun 9/20/2015 4:14:25 PM
Subject: Re: VW CEO apologizes for emissions, launches investigation

Thanks Chris. This will keep Dave Shepardson busy for a while.

Sent from my iPhone

> On Sep 20, 2015, at 11:53 AM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> FYI
>
> http://www.detroitnews.com/story/business/autos/foreign/2015/09/20/vw-ceo-apologizes-emissions-launches-investigation/72516684/
>
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Purchia, Liz
Sent: Sun 9/20/2015 4:22:55 PM
Subject: Re: EPA rules re Volkswagen Diesel engines

Thanks

Liz Purchia
U.S. EPA
202-564-6691
202-841-2230

On Sep 20, 2015, at 11:50 AM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

0.05g/mile

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 20, 2015, at 11:02 AM, Purchia, Liz <Purchia.Liz@epa.gov> wrote:

> Do you happen to quickly know, what the nox limits is for the vehicles in question for the years in question?
>
> Liz Purchia
> U.S. EPA
> 202-564-6691
> 202-841-2230
>
> Begin forwarded message:
>
> **From:** David Booth <Ex. 6>
> **Date:** September 20, 2015 at 11:00:22 AM EDT
> **To:** "Purchia, Liz" <Purchia.Liz@epa.gov>
> **Subject: Re: EPA rules re Volkswagen Diesel engines**
>
> Liz
>
> Thanks for this I will read thoroughly
> Can you answer jus one question please

What is the nox limits for the vehicles in question for the years in question

I want to make sure I quote the same number

Sent from my iPhone

On Sep 20, 2015, at 9:18 AM, Purchia, Liz <Purchia.Liz@epa.gov> wrote:

> Hi David - id recommend you check out this information
>
> More information on EPA's NOV: www3.epa.gov/otaq/cert/violations.htm
>
> More information on CARB's In-Use Compliance Letter: http://www.arb.ca.gov/newsrel/in_use_compliance_letter.htm
>
> Liz Purchia
> U.S. EPA
> 202-564-6691
> 202-841-2230

> Begin forwarded message:
>
> **From:** David Booth <>
> **Date:** September 20, 2015 at 7:23:23 AM EDT
> **To:** <stclair.christie@epa.gov>
> **Subject: EPA rules re Volkswagen Diesel engines**
>
> Dear Christie
>
> David Booth from Autovison magazine and National Post newspaper in Canada seeking counsel. Trying to make headway with the Volkswagen emissions information and was wondering if you could answer a few basic questions. I've tried wading through the EPA's various charts and regulations but it's a little like hieroglyphics for we mere mortals
>
> So:
>
> 1) Are emissions certifications self-administered by automakers in the same EPA-certified fuel economy numbers are, i.e. tested by manufacturer and attested to be accurate but subject to random testing by the EPA?
> 2) For the period in question — 2009 to 2015 — were the NOx requirements

the same for diesel and gasoline fuelled passenger cars?
3) The NOx limits for the cars in question — VWs — for the period in question (2009 to 2015), was it 0.4 g/mi or 0.2 g/mi?
4) Is their anything in the future standards that emulates the European Real Driving Emissions (RDE) test?

Thanks so much. Anything you can do to help would be much appreciated.

David Booth

David Booth
Ex. 6
Twitter.com/MotorMouthNP
http://driving.ca/author/motocanada

To: Robbie Diamond[RDiamond@secureenergy.org]
From: Grundler, Christopher
Sent: Mon 9/21/2015 2:41:12 AM
Subject: Re: In case you missed this

Ex. 6 Will try for the back table again. See you in the morning

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 20, 2015, at 10:39 PM, Robbie Diamond <RDiamond@secureenergy.org> wrote:

> Let's do tomorrow then. Where?
>
> **From:** Grundler, Christopher [mailto:grundler.christopher@epa.gov]
> **Sent:** Sunday, September 20, 2015 10:38 PM
> **To:** Robbie Diamond <RDiamond@secureenergy.org>
> **Subject:** Re: In case you missed this
>
> Robbie-- just got in town and learned that my OMB Budget hearing got moved from Wednesday to Tuesday at 9 due to papal traffic. If you are still up this leaves us a choice (I have a conflict Thursday):
>
> 1. Change plans to tomorrow At 7:30
>
> 2. Keep Tuesday but have breakfast at 7:00
>
> 3. Postpone
>
> I have a slight preference for tomorrow, but let me know yours. Ex. 6 till works for me.
>
> Chris

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 20, 2015, at 10:15 PM, Robbie Diamond <RDiamond@secureenergy.org> wrote:

> It is. You still choose. I am fine with the Ex. 6 It is totally up to you. I live nearby. Thanks.

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Sunday, September 20, 2015 7:20 PM
To: Robbie Diamond <RDiamond@secureenergy.org>
Subject: Re: In case you missed this

I'll take Tuesday if still open. You want to choose venue this time? Ex. 6

Ex. 6

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 19, 2015, at 8:11 PM, Robbie Diamond <RDiamond@secureenergy.org> wrote:

> I can do breakfast Monday, Tuesday, or Thursday. Let me know.

Regards,

Robbie

Sent from my iPhone

On Sep 18, 2015, at 7:32 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

> About to take off from DCA. back in town all next week and should be less distracted if you'd like to do breakfast again.
>
> Christopher Grundler, Director
>
> Office of Transportation and Air Quality
>
> U.S. EPA
>
> 202-564-1682 (DC)
>
> 734-214-4207 (Ann Arbor)
>
> On Sep 18, 2015, at 7:29 PM, Robbie Diamond <RDiamond@secureenergy.org> wrote:
>
> > Poor Drew Kodjak!
> >
> > Good work. It is crazy that anyone can think they can get away with that. There is no need to answer. It is just a musing.
> >
> > Have a wonderful weekend. See you very soon.
> >
> > **From:** Grundler, Christopher [mailto:grundler.christopher@epa.gov]
> > **Sent:** Friday, September 18, 2015 7:26 PM
> > **To:** Robbie Diamond <RDiamond@secureenergy.org>
> > **Subject:** Re: In case you missed this
> >
> > This is why I had to leave breakfast early.

And no, they don't. California, however will get about 10% of any penalty to spend as they wish; 90% of any penalty goes to the Treasury to pay the interest on your savings bonds

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 18, 2015, at 7:19 PM, Robbie Diamond <RDiamond@secureenergy.org> wrote:

I saw.

I hope ICCT gets to keep 1% of the penalty as a finders fee.

Thanks for sharing.

See you soon.

From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Friday, September 18, 2015 6:18 PM
To: Robbie Diamond <RDiamond@secureenergy.org>
Subject: In case you missed this

TRANSPORTATION:

Electric cars will be the quickest way to decarbonize the U.S., says industry-enviro group report

Benjamin Hulac, E&E reporter

Published: Friday, September 18, 2015

California Gov. Jerry Brown (D) issued an executive order in April that set a goal to cut the state's greenhouse gas emissions by 40 percent by 2030 and eventually 80 percent by 2050 compared with 1990 levels.

"I don't know how you're getting anywhere close to that without electrification," Ted Craver, CEO of Edison International, the parent company of Southern California Edison Co., said in an interview with *ClimateWire* yesterday, referring to that 2050 target.

Minutes earlier, Craver helped unveil a **report** from the Electric Power Research Institute and Natural Resources Defense Council about electrifying the U.S. transportation sector.

"This research points to the importance of two fundamental and parallel trends in energy and the environment," Mike Howard, EPRI president and CEO, said in a statement. "First is the continuing decarbonization of the electricity sector and second is the electrification of energy use in transportation and industry."

The report forecasts emissions through 2050, as well as air quality impacts in 2030, analyzing the effects of a significant shift from gasoline-fueled vehicles to plug-in electric models under two different scenarios -- a baseline and a lower-emissions model.

"Widespread electrification" of light- and medium-duty vehicles, under the baseline scenario, could cut annual greenhouse emissions 45 percent by midcentury, from 2015 levels, as electric automobiles supplant their combustion engine counterparts. And the lower-emission scenario would lower emissions about 75 percent during the same period, the results read.

The report's model predicts that, by 2050, 53 percent of citizens' distance behind the wheel, measured in vehicle miles traveled, will be powered by energy from the electric grid.

"Based on current policies that require greater efficiency for new vehicles," results without broad electric car adoption would cut emissions about 25 percent from levels this year by 2050, the

report concludes.

From 2003 to 2013, low natural gas prices, a rise in capacity for combined-cycle natural gas facilities, cross-state pollution rules, a drop in overhead costs for solar and wind equipment, and a tightening of environmental regulations, among other factors, have restrained both greenhouse gas and pollutant emissions from power plants.

Measured in intensity, carbon dioxide emissions dropped 15 percent, and sulfur dioxide and nitrogen oxide -- two pollutants U.S. EPA regulates -- fell about 70 and 50 percent, respectively, during that 2003-2013 time frame.

Accelerating out of a 'niche market'

"Hailing from Southern California," Craver told an audience at the National Press Club in Washington, D.C., "the air quality elements are extremely important to us." Electric cars and other transport-sector machinery must move beyond a "niche" market, he said. "Now is the call for action," he added. "We really need all of the nation to pull together."

Twenty-seven percent of U.S. greenhouse gas emissions come from the transportation sector -- second to the electricity sector, according to EPA data.

The report excluded heavier vehicles and vessels, such as boats and ships, airplanes, trains, and line-haul heavy-duty trucks, out of impracticality.

"In many ways, we were conservative from a technology point," said Mark Duvall, director of electric transportation and energy storage at EPRI. Accurately projecting the nationwide growth of the fully electric car market today seemed highly unlikely to many experts when EPRI released the first version of this report in 2007, Duvall said.

The authors did, however, examine the impact of powering work-related machines, such as forklifts and lawn mowers.

David Hawkins, director of climate programs for NRDC, said officials at his organization are confident EPA's Clean Power Plan will hold up to legal challenges, adding that the regulation is a "very important step" to correct market signals by pricing carbon.

The grid will certainly become cleaner, but whether the power sector lowers its emissions fast enough to ward off climate change's worst impacts remains an open question, he said. "This is a wave of the future that is on the road in small quantities today," Hawkins said. Electric vehicles' share of the U.S. automobile market is about 1 percent.

"We're the obvious group to really get this thing started," Craver said of utility companies, referring to encouraging growth in the EV market.

In a conversation after the report's release, Craver alluded to a new era in power generation for the nation. The utility business has been focused on power plants as the most important sections of their supply chains, he said. "Bulk power has been where all the action is," he said.

He said the most important links in utility companies' networks are shifting toward distribution. "Long term, I see a fundamental shift in how the industry is managed," he said. "Let's get in front of the parade and push this thing along."

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

Spam
Phish/Fraud
Not spam
Forget previous vote

Spam
Phish/Fraud
Not spam
Forget previous vote

Spam
Phish/Fraud
Not spam
Forget previous vote

Spam
Phish/Fraud
Not spam
Forget previous vote

Spam
Phish/Fraud
Not spam
Forget previous vote

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Non-Responsive
Sent: Mon 9/21/2015 3:31:02 AM
Subject: A ? For u as what to do

So I was one the many who researched and thought about it - and decided on Clean Diesel. I owned 2 Audi diesels. The Q7 (that we just got rid of) and the A3 that we still have/own. We get sometimes 42mpg on it. I occasionally wondered how the Q7 required the adblue and the A3 didn't. If you could get a diesel to pass inspections without the adblue why bother making a car that requires it? Now the truth is out and a recall initiated. A diesel engine without the adblue is a scam and they lied.

So now the A3 I paid off and was planning driving into the ground with it's good performance, excellent gas mileage and "green emissions" is worthless. No resale value whatsoever.

What kind of fix can they make anyway on recall? If the engine could perform under code they would have allowed it. The one possible fix to keep emissions down will be to reduce the engine performance (probably to unrealistic driving levels).

So I know a few smart people and will pose the question - what are they going to do?
What can I do?
The Huffington post says call and ask for a loaner now. Is that realistic? How hard should we - could we push on that call?

Is Vw/audi going to have to give refunds on 480000 cars - there is no fix?
It's not a ignition thing or an airbag thing. It's not going to risk killing you in an instant. But they lied and there is no realistic fix.

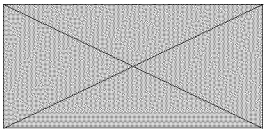
I----that was a post I made - i am curious as to what you would say

Thank u

Non-Responsive

Sent from my iPhone

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Environmental Law360
Sent: Mon 9/21/2015 7:31:16 AM
Subject: 9th Circ. Pesticide Ruling Holds EPA To High Standards



ENVIRONMENTAL

Monday, September 21, 2015

TOP NEWS

Calif. Opens Tap For Some Senior Water Rights Holders

In an easing of unprecedented water restrictions in drought-stricken California, the state's water regulator said Friday it is allowing more than 200 farmers who've held water rights for more than 100 years to resume pulling from waterways to irrigate their crops and care for their livestock.

9th Circ. Says Nevada Water Pumping No Threat To Rare Fish

The Ninth Circuit on Thursday sided with a lower court's dismissal of a conservation group's lawsuit claiming groundwater-pumping in a Nevada wildlife refuge was unlawful and threatened the survival of a critically endangered fish species.

NJ Senator Continues Battle Against $225M Exxon Mobil Deal

Stoking the ongoing controversy over Exxon Mobil Corp.'s $225 million payout to New Jersey to settle natural resource damages, Sen. Raymond J. Lesniak on Friday denounced the state's rebuttal to his second motion to join the litigation so he can appeal the deal, and planned to reply.

9th Circ. Won't Reconsider Failed Challenge To Shark Fin Law

The Ninth Circuit has refused to rethink its ruling tossing a bid made by two Asian-American groups to overturn California's shark fin law banning the sale of what some consider a delicacy, denying a petition for en banc rehearing.

EPA Says Volkswagen Cars Flouted Emissions Limits

The U.S. Environmental Protection Agency on Friday accused German automotive giant Volkswagen AG of selling diesel cars equipped with software designed to evade federal nitrogen oxide emissions standards in violation of the Clean Air Act.

ANALYSIS

LAW FIRMS

Baker Botts

Baker Donelso

BakerHc

Beck Redden

Bryan Cave

Cleary Gottlieb

Covingtc & Burling

Crowell & Moring

Dechert

Dentons

Dewey & LeBoeuf

Dorsey & Whitney

Drinker

9th Circ. Pesticide Ruling Holds EPA To High Standards

The Ninth Circuit appeared unwilling to defer to the U.S. Environmental Protection Agency's scientists when it reversed the approval of a controversial pesticide because of its danger to bees, possibly portending a tougher road ahead for pollinator-harming chemicals, experts said.

ENFORCEMENT

Texas Fires Off $1.4M In Fines Against Pipelines, Utilities

Texas' top energy regulator on Friday announced more than $1.4 million in fines against 920 companies and public utilities including AmeriGas Propane LP and the San Antonio water system for rule violations such as pollution discharges and safety concerns.

LITIGATION

Exxon Pollution Suit Sidesteps Regulators, 5th Circ. Told

Oil and chemical industry groups warned the Fifth Circuit on Thursday that a failure to uphold a Texas district court's dismissal of a $641 million air pollution lawsuit brought by environmental groups against ExxonMobil Corp. would result in a "cascade of citizen suits" replacing regulatory authority.

Mining Group Asks 9th Circ. To Slash DOI's Withdrawal Power

The National Mining Association urged the Ninth Circuit on Friday to strike down an entire section of the Federal Land Policy and Management Act after an Arizona federal judge found the U.S. Department of the Interior's 20-year ban on uranium mining around the Grand Canyon does not violate any laws.

Army Corps Says Snake River Dredging Challenge Is Moot

The U.S. Army Corps of Engineers urged a Washington federal court Thursday to dismiss a suit from Idaho's Nez Perce Tribe and environmental groups, saying the plaintiffs' challenge to an already-completed sediment dredging action in the lower Snake River is moot and lacks redressable injuries.

Calif. Appeals Court Nixes SF Waterfront Condo Land Swap

A California appeals court on Thursday affirmed a public interest group's victory that invalidated a land swap deal supporting a luxury condo project on the San Francisco waterfront because the land exchange never had an environmental review.

DC Circ. Says Cobell Class Reps' Expense Bid Needs 2nd Look

The D.C. Circuit on Friday rejected a claim for expenses by the lead plaintiff in a landmark $3.4 billion Cobell settlement over the federal government's mismanagement of Native

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American trust funds, but remanded the question of whether class representatives could receive reimbursement of third-party expenses.

DEALS

NRG Spins Off Clean Energy Biz, Nets $210M For Wind Farms

NRG Energy Inc. said Friday that it would spin off its clean energy businesses and drop down a portfolio of wind farms to its yieldco NRG Yield Inc. for $210 million, as the merchant power giant looks to streamline its operations and cut costs and debt.

PEOPLE

Baker Donelson Snags Ex-Memphis Law Division Atty

Baker Donelson Bearman Caldwell & Berkowitz PC has bolstered its real estate group with the addition of a former Memphis Law Division attorney with government contracting experience who is focused on economic development and environmental law, the firm announced recently.

EXPERT ANALYSIS

No National Renaissance For Nuclear From Clean Power Plan

It remains to be seen how much of a lifeline the final version of the Clean Power Plan offers future nuclear generation. The likely outcome is that the CPP will help fuel growth in nuclear generation in those regions hardest hit by the plan, but will fall short of the national renaissance hoped for 10 years ago, say Daniel Hagan and Jane Rueger of White & Case LLP.

LEGAL INDUSTRY

Pro Bono Firm Of 2015: Sullivan & Cromwell

Sullivan & Cromwell LLP's pro bono efforts over the last year resulted in new protections for immigrant detainees with serious mental health issues and a federal judge's declaration that North Carolina's ban against same-sex marriage was unconstitutional, earning it a spot on Law360's Pro Bono Firms of 2015.

Trial Ace: Robins Kaplan's Roman Silberfeld

Growing up in Germany, Roman Silberfeld had been taught that practicing law was a noble profession on par with being a doctor. But because he couldn't stand the sight of blood, he chose litigation over sutures and ended up becoming one of the most sought-after trial attorneys around.

5 Law Firms Making Waves In 2015

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From imposing "big brother" programs on their attorneys to designing legal robots and getting rid of summer associate programs, a number of law firms have made revolutionary strides over the past year. Here, Law360 takes a look at some trailblazing firms and how they are shaking things up.

Dewey Jury Weighs Doubt, Larceny Standards

Jurors in the trial of the former leaders of Dewey & LeBoeuf LLP on Friday questioned the standard for finding a defendant guilty beyond a reasonable doubt and wondered whether ignorance of a lie was a defense for grand larceny as deliberations stretched into a second full day.

An In-House Guide To Handling A Regulatory Probe

Whether the U.S. Securities and Exchange Commission spies accounting irregularities, the Federal Trade Commission suspects false ad content, or the U.S. Department of Health and Human Services is concerned about privacy violations, the backbones of government investigations have commonalities, and so do the steps companies must take to respond. Here, experts weigh in on how general counsel should handle a government investigation and what to avoid.

In Case You Missed It: Hottest Firms And Stories On Law360

For those who missed out, here's a look back at the law firms, stories and expert analyses that generated the most buzz on Law360 last week.

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Christian Wuest
Sent: Mon 9/21/2015 11:01:08 AM
Subject: "Spiegel"-request on Volkswagen-case

Dear Mr Meetu,

we have a short and simple question: are other manufacturers under investigation of EPA or is the Volkswagen-case the only example of its kind that became known to the authorities?
I´d be thankful for a brief and clear response.

Kind regards
Christian Wüst
christian_wuest@spiegel.de

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Werner, Jacqueline
Sent: Mon 9/21/2015 11:08:12 AM
Subject: GMA new report on VW

VW "deeply sorry" for emissions manipulation. Stock plunges 22% in morning trading today.

Sent from my iPhone

Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: EnergyGuardian
Sent: Mon 9/21/2015 11:19:33 AM
Subject: Analysis: Seven years later, the Keystone fight continues

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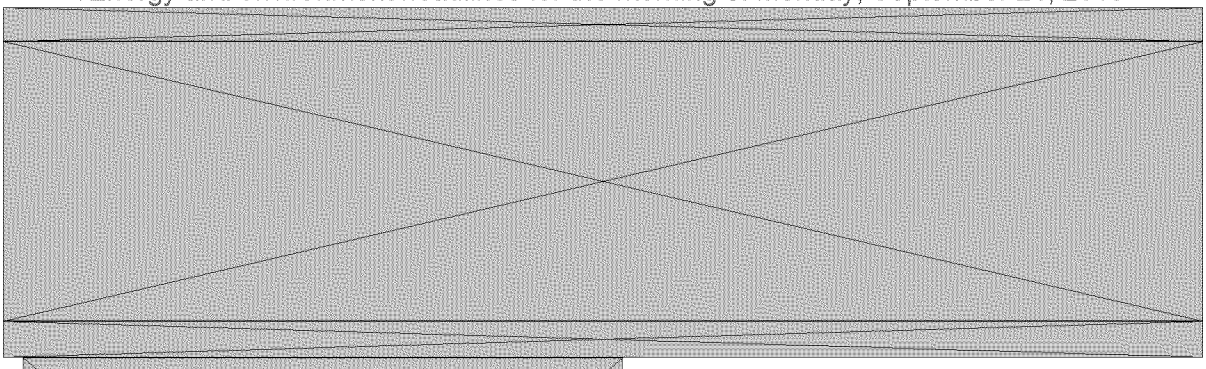
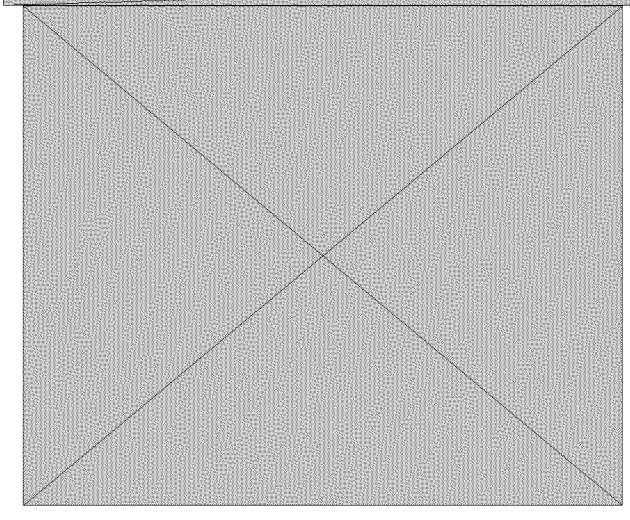
Energy and environment headlines for the morning of Monday, September 21, 2015





Analysis: Seven years later, the Keystone fight continues

By Kevin Rogers

Saturday marked the seven-year anniversary of TransCanada's first application for the Keystone XL pipeline, and despite an expected rejection of the project, its backers are still pressing the issue as proof that President Barack Obama's energy policy is out-of-touch with the nation's priorities.

In the lead up to the anniversary, Republicans and the oil industry have sought to keep focus

on the pipeline that would carry oil sands from Alberta to Gulf Coast refineries. They have unveiled polling and statements to highlight U.S. support for the project while criticizing the Obama administration's continued delays.

"Every September, we mark an anniversary that has become symbolic of the administration's obstructionism: the filing of the construction permit for the Keystone XL pipeline. This year marks seven years since the permit was first filed," Sen. John Thune, R-S.D., the chairman of the Senate Republican Conference, wrote in an op-ed piece Friday.

"I recognize that the Keystone XL pipeline is only one project, but the administration's attitude toward important energy investment has become all too pervasive," he continued.

The American Petroleum Institute on Thursday unveiled polling that showed the project had broad support from the American public. The survey of 907 register voters found that 68 percent either strongly or somewhat supported the pipeline, and 85 percent said the decision shouldn't lie solely with Obama.

The oil industry group also highlighted the series of reviews conducted on the project, noting the series of federal reviews that found limited environmental impacts, should the pipeline be built.

"Five of his own administration's reviews have determined the project to be safe and environmentally sound, yet the administration has turned its back on our closest ally and trading partner in favor of professional activists who are advocating a 'leave it in the ground' approach to energy," said Cindy Schild, API downstream operations senior manager for refining and oil sands.

Legislation to approve the project was the first move of the full Republican-led Congress earlier this year. Both chambers approved the measure but failed to overcome a White House veto. Obama said at the time that the bill "conflicts with established executive branch procedures and cuts short thorough consideration of issues that could bear on our national interest."

Obama has said he wouldn't approve Keystone XL if it would "significantly exacerbate the problem of carbon pollution."

The project, for now, remains in a State Department review process, though it supporters aren't hopeful that Obama will reverse course now.

Speaking at a National Journal event on crude oil exports last week, Sen. John Hoeven, R-N.D., who sponsored the Senate legislation to approve the pipeline, said he's expecting a rejection once Canada's elections are settled.

"I think the next date to watch for is October 19," he said. "I think the president would have turned it down already, perhaps on his trip to Alaska, but it kind of got embroiled in the prime minister election in Canada. I would expect sometime after 19, it's very likely we'll

see the administration turn down Keystone."

Hoeven, however, said the pipeline's fate may not be decided by Obama in the end.

"This is something supported by the American people, by the Congress, and in the long term, that means me we will get it. It's just a matter of when," he said.

The debate continues as Canada's oil sands have felt the effects of the slide in global oil prices. The more intensive extraction process and the low return on investment has worked to slow development. As of Friday trading, Western Canada Select stood at $40.86 per barrel, down about $8 from U.S. crude prices and more than 50 percent lower than the previous year.

Keystone, meanwhile, has remained a fixture in U.S. presidential politics, with Republican candidates keeping the project a mainstay of their economic platforms.

On the Democratic side of the equation observers await former Secretary of State Hillary Clinton's opinion. While her leading liberal challenger, Vermont Sen. Bernie Sanders, has made his opposition clear, Clinton has delayed revealing her stance on the issue.

While she had previously said she would defer to the White House, last week in New Hampshire she indicated that she would reveal her position soon.

"I can't wait too much longer. I am putting the White House on notice. I am going to tell you what I think soon because I can't wait," Clinton said, according to several media reports.

Regardless of what Obama finally rules on the project in the final year of his presidency, the debate over Keystone XL appears poised to echo through 2016.

Quick Links

VW chief "sorry" after EPA says firm skirted clean air law

Judge poised to sign off on oil train disaster settlement

Shift in US firefighting prioritizes sage grouse in West

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Report predicts many oil projects to be scrapped with low prices

Oil gains on drop in rig count

Family man fighting EPA over pond in Wyoming

Duke to pay more for Indiana coal gasification plant

Britain to kick in for new nuke plant

Copenhagen climate conference may be looking better in hindsight

Upcoming Events

VW chief "sorry" after EPA says firm skirted clean air law

By Paul Wiseman and Tom Krisher

WASHINGTON (AP) — The CEO of Volkswagen apologized Sunday and VW customers said they felt duped after the Environmental Protection Agency revealed that the German automaker skirted clean air rules by rigging emissions tests for about 500,000 diesel cars.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Volkswagen chief Martin Winterkorn said in a statement. He said VW has ordered an investigation and promised that the company would cooperate with regulators.

The EPA said Friday that VW used software that allowed its diesel cars to release fewer smog-causing pollutants during tests than in real-world driving conditions. The cars, built in the last seven years, include the Audi A3, VW Jetta, Beetle, Golf and Passat models. The agency ordered VW to fix the cars at its own expense. VW also faces fines that could add up to billions of dollars.

VW edged out Toyota to become the world's top-selling automaker the first half of 2015. But a hit to its reputation from the emissions revelations could hamper its efforts at a sales rebound in the U.S. Between 2013 and 2014, VW brand sales plummeted 10 percent even as overall industry sales rose 6 percent. U.S. buyers want SUVs, and Volkswagen doesn't have competitive vehicles to offer them.

More

Judge poised to sign off on oil train disaster settlement

By David Sharp

PORTLAND, Maine (AP) — A $338 million settlement fund for victims of a fiery train derailment that claimed 47 lives in Canada is poised for final approval, but payments could be held up by a legal challenge from one of that country's largest railways.

Canadian Pacific, which opposes the settlement fund, declined to contribute because it contends others were responsible for the tragedy.

If the settlement is approved, Canadian Pacific would be left open to lawsuits while those the railroad considers to be responsible would be shielded from further legal battles by the agreement.

"The bottom line is this: We will not contribute to this fund because it frees those parties responsible for the derailment from future liability and legal action, and we continue to contend that we were not among the parties responsible," said Martin Cej, a CP spokesman in Calgary.

More

Shift in US firefighting prioritizes sage grouse in West

By Scott Sonner and Mead Gruver

RENO, Nev. (AP) — Federal agencies deciding how to deploy firefighters during one of the West's worst wildfire seasons are considering a new factor in their deliberations: an imperiled bird that inhabits a vast stretch of sagebrush from California to the Dakotas.

Officials have already mapped out the greater sage grouse's habitat west of the Rockies, where wildfire is considered a primary threat to the bird. They've positioned semi-trailer sized water containers in areas that need protecting. And wildlife biologists are advising firefighters.

While fire officials note that human life is the first priority, the shift in strategy comes as a Sept. 30 court-imposed deadline looms for the U.S. Fish and Wildlife Service to decide whether to list the bird as a threatened or endangered species.

The new strategy paid off in August. Firefighters were able to quickly protect all but about 1,000 acres of priority habitat during a 10,000-acre fire 120 miles northwest of Reno, Nevada, said Walter Herzog, the U.S. Bureau of Land Management's fire management officer for Northern California.

More

In a Mideast upset by cheap oil, more crude may enter market

By John Gambrell

DUBAI, United Arab Emirates (AP) — Across a Mideast fueled by oil production, low global prices have some countries running on empty and scrambling to cover shortfalls, even as more regional crude is on tap to enter the market.

While some Gulf nations rest on ample reserve funds, embattled Iraq is desperate to scrounge up more money for its fight against the extremist Islamic State group as protesters demand repairs to its failing power grid. Contrast that to neighboring Iran, whose nuclear deal with world powers positions it to re-enter the global oil market and make long-needed repairs to its fields to increase its daily production.

The possibility of more supply entering the market has analysts already lowering their forecast price for oil into the next year. And even if the price rises, industry experts say U.S. production quickly could ramp up and keep prices low for years to come, challenging the power of OPEC.

"There's almost no way that OPEC can get the band back together," said Greg Priddy, the director for global energy and natural resources at the Eurasia Group. "You can't get prices rapidly back up ... because you'd get runaway growth in the U.S."

More

Head off climate change in 15 years? UN sets sweeping new goals

By Steven R. Hurst, The Associated Press

A season of goal-setting begins this month as the United Nations launches a new 15-year plan to quell climate change, fight grinding world poverty and improve health and education.

The Sustainable Development Goals are set for adoption by the 193 U.N. member states shortly after Pope Francis brings his activist message to the world body on Friday — a message sure to include calls to pull back from the abyss of a heating world and to spread global wealth among the neediest.

More than 150 world leaders, including President Barack Obama and Chinese President Xi Jinping, are expected to speak at a three-day summit dedicated to adopting the goals. That meeting precedes the annual gathering of world leaders at the U.N. beginning Sept. 28.

The new goals land on the global agenda in advance of December's world meeting in Paris aimed at a comprehensive agreement on curbing accelerating global warming.

More

A message from America's Natural Gas Alliance

Clean is Powerful. Natural gas helps Georgia Power's plant generate electricity with 50% fewer emissions. Think about it.

Learn more at www.thinkaboutit.org.

US-China agenda as Chinese leader Xi comes for state visit

By Matthew Pennington

WASHINGTON (AP) — Key issues facing the United States and China as the Asian nation's leader, Xi Jinping, makes his first U.S. state visit since becoming president in 2013. President Barack Obama will host Xi at the White House on Friday.

CLIMATE CHANGE

China and the U.S. are the two largest source countries of the emissions that contribute to

global warming, and combating climate change has become a promising area of cooperation. Last November, Obama and Xi made a joint announcement on curbing emissions, giving a nudge to world leaders ahead of a summit this December in Paris aimed at reaching a global climate change deal. The U.S. and China have announced joint research and U.S. and Chinese cities are setting targets on cutting emissions.

CYBERSECURITY

Hacking attacks on U.S. companies and government agencies have become a growing source of tension. China is suspected in the theft of personal data of millions of current and former U.S. government employees. But Washington's main beef with China is over state-sponsored cybertheft for economic benefit of Chinese companies. It says that goes beyond traditional intelligence gathering. Last May, U.S. authorities issued criminal indictments against five Chinese military hackers accused of stealing from U.S. corporations. China responded by pulling the plug on a formal dialogue with the U.S. on cyber issues. The U.S. says it is preparing further measures to punish industrial espionage but appears unlikely to act against China before the summit.

SOUTH CHINA SEA

China has alarmed its neighbors with a massive campaign of artificial island-building to assert its claims to disputed reefs and islets in the South China Sea. It has reclaimed about 3,000 acres of land in the past year-and-a-half by dredging sand from the ocean bed, causing environmental destruction. While the U.S. is not among the six territorial claimants in the South China Sea, it has been increasingly critical of China's conduct, which it says stirs tensions and threatens freedom of navigation in international waters key to global trade. Lawmakers have been pressing for the U.S. Navy to flex military muscle by sailing close to the artificial islands to show the U.S. does not recognize China's sovereignty claim. China says the U.S. should mind its own business.

More

Alaskans eager to learn amount of upcoming oil payout

By Rachel D'Oro

ANCHORAGE, Alaska (AP) — Oil prices are so low, they're hovering at benchmarks not seen in years, plunging oil-dependent Alaska into a crippling budget deficit. But the industry's woes won't affect the payout from the state's oil investment account to Alaskans even though state government has been scrambling to pay the bills.

In fact, most predictions put the yearly oil check at near record levels, about $2,000 for nearly every man, woman and child who lives in the 49th state. Last year's check was $1,884.

Gov. Bill Walker will announce the amount of this year's checks during a much-ballyhooed news conference Monday.

More

UN nuke agency: Iran's role in nuclear probe meets standards

By George Jahn

TEHRAN, Iran (AP) — The chief of the U.N. nuclear agency has acknowledged that it agreed to have Iranian experts take samples it wants to analyze for signs that Tehran might have worked on atomic arms. But it says that the probe meets strict agency standards.

Such sampling is usually done by experts of the U.N.'s International Atomic Energy Agency. But IAEA chief Yukiya Amano says that Iranians carried out that part of the probe at Parchin, where the agency suspects that explosive triggers for nuclear weapons might have been tested.

The transfer appeared to be part of a confidential draft agreement with the agency that allows Iran to gather its own samples. It wasn't immediately clear if IAEA experts were present during the sampling.

However, Amano said Monday that the procedure meets strict agency criteria. He says the IAEA confirms "the integrity of the sampling process and the authenticity of the samples."

Done deal for Iran nuke pact, but debate still in Congress

By Deb Riechmann

WASHINGTON (AP) — It's a done deal, yet opponents of the Iran nuclear agreement won't go quietly.

The 60-day congressional review period has expired, and last week the State Department outlined its plan to put in place an accord that aims to prevent Iran from becoming nuclear-armed. Congress is poised to start cranking out legislation to reinstate sanctions or shore up what some lawmakers say is an ill-fated pact with a state supporter of terrorism.

Sen. Bob Corker, chairman of the Senate Foreign Relations Committee, has begun a series of hearings on the U.S. role and strategy in the Middle East that will examine the deal's implications.

"It's going to take a while. It's a very substantive issue," said Corker, R-Tenn., who opposed

the deal. "It will be a complex piece of legislation."

More

Northern California wildfire destroys another 162 homes

By The Associated Press

MIDDLETOWN, Calif. (AP) — California fire officials said Sunday a wildfire north of San Francisco destroyed another 162 homes, raising the number of homes destroyed to 1,050 and making it the fourth worst wildfire in the state's history.

The tally brought the total number of homes destroyed in two wildfires burning in Northern California the past two weeks to nearly 1,600, the California Department of Forestry and Fire Protection said. Those fires killed five people, and on Sunday authorities announced that a body was found near the source of a new wildfire in Monterey County that destroyed or damaged 10 homes.

Firefighters found the man's body inside a charred vehicle after the fire began Saturday near the community of Jamesburg. Investigators were investigating his death as a possible suicide, Monterey County Sheriff's spokesman John Thornburg said.

Farther north, two massive wildfires continue to threaten thousands more homes.

More

Catholic lawmakers thrilled by upcoming visit of Francis

By Erica Werner

WASHINGTON (AP) — House Speaker John Boehner has been trying for 20 years to get a pope to come talk to Congress, and now it's finally happening. To House Minority Leader Nancy Pelosi, it's "thrilling beyond words."

This week's historic address by Pope Francis to a joint meeting of Congress has lawmakers of all political affiliations and religious backgrounds buzzing. For the many Catholic lawmakers on Capitol Hill, including Republican Boehner and Democrat Pelosi, the occasion carries special significance, even as they brace for the unconventional pontiff to make both parties squirm with his focus on hot-button political and social issues.

Ahead of Thursday's speech, many lawmakers said they hope that the leader of the globe's 1.2 billion Catholics will provoke members of Congress to pause, reflect, and refrain, if only

temporarily, from the partisan struggles and political bickering that normally dominate the House chamber where he will speak.

At the same time, lawmakers have begun invoking the pontiff to make points on one issue or another, with Democrats in particular hopeful that he will provide backing against the Republican majority on issues such as climate change, income inequality and immigration.

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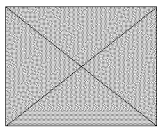

Week in Review – House Panel Moves To Lift Export Ban

Congress Gears up for Papal Visit.

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LWCF wins backing from majority of senators

Fifty-two senators, including 12 Republicans led by Sen. Richard Burr, sent a letter to leadership urging the Senate to pass a bill this month reauthorizing the Land and Water Conservation Fund, The Hill reports.

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FWS revisiting spotted owl case in California

Faced with new research included in a filing from environmental groups late last year, the Fish and Wildlife Service has agreed to reconsider its refusal to extend Endangered Species Act protection to the California spotted owl, the Los Angeles Times reports.

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Clinton wants concessions in order to support crude exports

Democratic presidential candidate Hillary Clinton says she would need to win concessions from the oil and gas industry in order to support lifting of the ban on crude exports, The Hill reports.

More

Debt payments absorbing most of drillers' cash

Hit hard by sliding crude prices that have slashed their revenue, shale drillers were spending 83 percent of their operating cash flow on debt payments in the second quarter, compared to 58 percent during the period a year earlier, FuelFix reports.

More

Report predicts many oil projects to be scrapped with low prices

A report by analysts Monday says the slump in crude oil prices is endangering about $1.5 trillion worth of projects being planned for the oil and gas industry, Dow Jones reports.

More

Oil gains on drop in rig count

A third straight week of a decline in the U.S. oil rig count, combined with a report that low oil prices were threatening industry projects, helped support prices early Monday. U.S. benchmark crude gained 70 cents to $45.38 a barrel in electronic trading on the Nymex, while in London Brent was 70 cents higher to $48.17, Reuters reports.

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Family man fighting EPA over pond in Wyoming

Andy Johnson's battle against the Environmental Protection Agency, which is trying to fine him and force him to dismantle a pond he created on his Wyoming land, is symbolic of a larger battle against federal regulation across the West, The New York Times reports.

More

Duke to pay more for Indiana coal gasification plant

Duke Energy is promising to pick up an extra $85 million tab for cost overruns at its troubled coal gasification plant near Edwardsport in southwestern Indiana, rather than increase charges on ratepayers, The Associated Press reports.

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Britain to kick in for new nuke plant

Britain announced Monday that the plan by EDF to build the country's first new nuclear power plant in 20 years will get more than $3 billion in government support, The New York Times reports.

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Copenhagen climate conference may be looking better in hindsight

Much criticized after it concluded, the global climate conference held in Copenhagen in 2009 laid much of the groundwork for the gathering set for Paris in December, National Journal reports.

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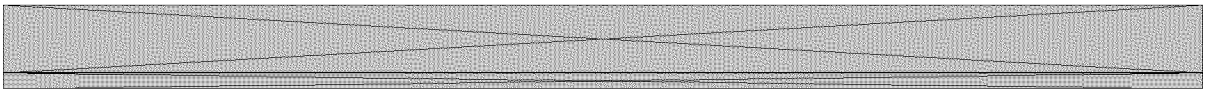
Upcoming Events



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From: Stewart, Gwen
Required Attendees: Bunker, Byron
Optional Attendees: Jones, Jacqueline; Stewart, Gwen; Wehrly, Linc; Snyder, Jim; Cohen, Janet; Cook, Leila
Location: Non-Responsive
Importance: Normal
Subject: VW Meeting
Start Date/Time: Mon 9/21/2015 2:30:00 PM
End Date/Time: Mon 9/21/2015 3:00:00 PM

MEETING REQUEST:

Pls add mtg with Byron and his VW team (30 min)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Stewart, Gwen
Sent: Mon 9/21/2015 11:34:12 AM
Subject: RE: Monday

Good Morning:

I will take care of the below items.

Gwen Stewart
Office of Transportation and Air Quality
202 564-1682 Telephone
202 564-1686 Fax Number
Stewart.gwen@epa.gov

-----Original Message-----
From: Grundler, Christopher
Sent: Monday, September 21, 2015 6:40 AM
To: Stewart, Gwen
Subject: Monday

Hi

Non-Responsive

Pls add mtg with Byron and his VW team (30 min)

Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

From: Grundler, Christopher
Required Attendees: Bunker, Byron
Optional Attendees: Jones, Jacqueline; Stewart, Gwen; Wehrly, Linc; Snyder, Jim; Cohen, Janet; Cook, Leila
Location: Non-Responsive
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MEETING REQUEST:

Pls add mtg with Byron and his VW team (30 min)

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: The Washington Post
Sent: Mon 9/21/2015 11:51:50 AM
Subject: [SPAM] The Daily 202: Pope Francis visit puts Republicans on the defensive

View The Daily 202 on the Web

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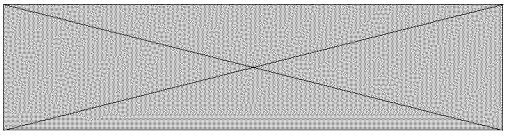
Pope Francis meets with Fidel Castro in Havana on Sunday. The Vatican described the 40-minute meeting at Castro's residence as informal and familial, with an exchange of books. (AP Photo/Alex Castro)



THE BIG IDEA:

— Back when John Paul II was Pope, conservatives relished attacking Democrats as "Cafeteria Catholics" for picking and choosing the church teachings that fit their politics. In 2004, the archbishop of St. Louis warned John Kerry, the Democratic presidential nominee, "not to present himself for communion" because of his support for abortion rights. That cycle, the conservative Sioux Falls bishop ordered Tom Daschle to stop describing himself as a member of the Catholic Church, a breathtaking directive that Republicans used in their campaign to topple the then-Senate minority leader.

— With a new Pope, the shoe is on the other foot. Francis is a change agent who has de-emphasized traditional concerns like contraception, abortion, gay marriage and stem-cell research. The Argentine has spent much of his two-and-a-half years at the helm pressing issues that make conservatives uncomfortable.

— Top Democrats privately hope that Francis's trip to the United States, which begins tomorrow, will make GOP leaders squirm as much as possible. Six Republican presidential candidates are Catholic: Jeb Bush, Marco Rubio, Chris Christie, Bobby Jindal, Rick Santorum and George Pataki. The challenge for them is showing the Pope respect while distinguishing the moral realm from the political one, a delicate balancing act practiced by Democrats since John F.

Kennedy.

— Here are seven of the major issues on which Pope Francis differs from most Republican politicians:

1. **He wants to open Cuba.** His Vatican played a central behind-the-scenes role in last year's secret U.S.-Cuba negotiations. Long before he was elevated to the papacy, with a book he wrote in the '90s, Francis spoke out against the American embargo. Visiting Cuba this weekend, he praised the thaw between the two long-estranged neighbors as "an example of reconciliation for the entire world" that "fills us with hope."
2. **He strongly backs immigration reform.** The pope has decried the "inhuman" conditions that migrants face coming to the U.S. from Mexico, and he's prodded Europe to accept more Syrian refugees. "I expect that Francis, in his address to Congress, will challenge our national conscience on immigration and remind us of the growing human toll resulting from our indifference and failures of political will," Jose H. Gomez, the archbishop of Los Angeles, the nation's largest Catholic community, writes in an op-ed for today's Wall Street Journal. "In calling Americans to compassion and hospitality, he will also be calling us to reclaim our roots as a nation of immigrants and a refuge for the world's downtrodden."
3. **He calls for aggressive climate change action.** The Pope issued a 184-page encyclical on climate change this summer, saying humans are mostly to blame. "The Earth, our home, is beginning to look more and more like an immense pile of filth," he said, describing global warming as "one of the principal challenges facing humanity in our day."
4. **He supports the Iran nuclear deal.** Last week, at the International Atomic Energy Agency conference in Vienna, the Vatican's foreign minister praised President Obama's agreement, saying that "the way to resolve disputes and difficulties should always be that of dialogue and negotiation."
5. **He recognizes Palestinian statehood.** The Vatican signed a May treaty that was widely criticized by Jewish leaders in both Israel and the U.S.
6. **He talks about income inequality more than even the Democratic presidential candidates.** Francis spent decades pastoring in the slums. "Inequality is the root of social evil," Francis says. He decries "trickle-down theories" as a "structurally perverse

economic system." Visiting Bolivia this summer, the Pope called the unfettered pursuit of money "the dung of the devil." He says the problems of the poor should be "radically resolved by rejecting the absolute autonomy of markets and financial speculation."

7. **A devotee of social justice, this Pope has repeatedly urged more public assistance for the poor.** "Politics, though often denigrated, remains a lofty vocation," Francis wrote in a 2013 exhortation. "I beg the Lord to grant us more politicians who are genuinely disturbed by the state of society, the people, the lives of the poor! It is vital that government leaders and financial leaders take heed and broaden their horizons, working to ensure that all citizens have dignified work, education and healthcare."

President Obama meets with Pope Francis in March 2014 at the Vatican. (AP Photo/Pablo Martinez Monsivais)

— The Pope will have several opportunities this week to weigh in on these hot-button issues. Vatican officials have telegraphed that he will be "frank but friendly." Francis arrives at Andrews tomorrow at 4 p.m., marking the first time ever he will set foot on American soil. On Wednesday, he meets with President Obama at 9:15 a.m. After a parade, he addresses the U.S. Bishops Conference and then performs a mass of canonization for Junipero Serra. On Thursday, he addresses a joint session of Congress at 9:20 a.m. On Friday, he speaks to the United Nations at 8:30 a.m. On Sunday, he could offer support for criminal justice reform during a visit to a Pennsylvania prison.

— What the 78-year-old will say is always unpredictable, but the vast majority of Catholics support his meddling in public policy. Two-thirds of American Catholics said in a Washington Post-ABC poll that it's appropriate during his congressional address for the Pope to urge action on social, economic and environmental issues. Only 13 percent of Catholics want the pope to be *less* active on such issues, compared to 30 percent who wish he was *more* active and 52 percent who want him to stay the course. Our poll found that only 55 percent of U.S. adults view the Catholic Church favorably, but 70 percent see Francis positively. Two-thirds of Americans, and an even higher 89 percent of self-identifying Catholics, approve of the direction in which Francis is leading the church. Only 13 percent of Catholics disapprove.

— Watch for escalating backlash to Francis from the Right.

- **George F. Will**, who often praised John Paul II for his role in helping win the Cold War, ripped the new Pope's "fact-free flamboyance" in a Sunday column.
- Rep. **Paul Gosar** (R-Ariz.), who calls himself "a proud Catholic," announced plans last week to boycott the joint session because of Francis's "fool's errand of climate change." He writes in a TownHall op-ed that he has "a moral obligation" to "call out" the leader of his church and urges Francis to instead discuss religious freedom or the sanctity of human life.
- **Chris Christie** yesterday criticized the Pope's support for engagement with Cuba. "I just think the Pope was wrong," he said. "The fact is that his infallibility is on religious matters, not on political ones."
- **Donald Trump** was asked Sunday about the Pope's criticism of people who worship money. "If he knew me," The Donald quipped, "I think he'd probably like me."
- **Jeb Bush** said in June: "I hope I'm not going to get castigated for saying this by my priest back home, but I don't get economic policy from my bishops or my cardinals or my Pope."
- **Rick Santorum** as been less nuanced. "It's sometimes very difficult to listen to the Pope and some of the things he says off the cuff," he complained earlier this year.
- **Matt Drudge**, the most influential curator on the right, slammed Francis as a hypocrite:

(@Drudge)

Welcome to The Daily 202,
PowerPost's morning newsletter.
Sign up to receive the newsletter.
With contributions by Elise Viebeck.

WHILE YOU WERE SLEEPING:

Julia Louis-Dreyfus accepts the award for Outstanding Lead Actress In A Comedy Series for her role in HBO's "Veep" at

the Emmy Awards in Los Angeles last night. (Lucy Nicholson/Reuters)

— "Veep" crushed it at the Emmy's. "Amy Schumer had all the buzz for lead comedy actress, but it wasn't enough to topple 'Veep' star Julia Louis-Dreyfus, who won her fourth trophy in a row," Emily Yahr writes in a wrap-up from the award's show. "The little-watched HBO comedy won best comedy, finally knocking 'Modern Family' from its perma-win perch. Tony Hale also nabbed a trophy for supporting comedy actor, while the show also won for outstanding writing." Read Post TV critic Hank Stuever's take here and see a full list of winners here.

— Hillary Clinton grows her lead over Bernie Sanders, according to a just-posted CNN/ORC poll. Clinton nabs 42 percent of Democratic primary voters compared to 24 percent for Sanders and 22 percent for Joe Biden, who is not in the race. Martin O'Malley barely gets 1 percent. Clinton was up 10 points, 37-27, in early September. If Biden doesn't run, Clinton's support would spike by 15 percentage points, compared to a mere 4 percent for Sanders.

The Democratic numbers come a day after CNN released post-debate Republican numbers that showed **Carly Fiorina surging.** Trump still leads the GOP pack with 24 percent of the vote, down from 32 percent in early September. Carly Fiorina shot up by 15 points into second place, surpassing Ben Carson, who ranked third. Scott Walker completely tanked, rating one-half of one percentage point after leading in early Iowa polls. Read the full results here.

— Hillary to focus on health care in Louisiana today. "Clinton will begin filling in details this week of her proposal to tweak the Affordable Care Act, and she will attempt to use Republican presidential candidates' opposition to the health-care-expansion law against them," Anne Gearan scooped over the weekend, using a series of events in Louisiana, Arkansas and Iowa to needle Republicans. Clinton will particularly highlight Louisiana Republican Gov. Bobby Jindal's opposition to the law during a political event in Baton Rouge on Monday. He has declined to expand Medicaid under the ACA.

And Jindal is eager to mix it up with her. In a statement shared first with The Daily 202, the governor says: "As Secretary Clinton seeks to distract the voters from her e-mail scandal, she is coming to Louisiana to lecture us about the need for bigger government and socialism. Louisianians, and people across America, will not be

fooled. After all, Secretary Clinton is the godmother of socialized medicine. The government takeover of our healthcare system started with HillaryCare in the 1990's."

GET SMART FAST:

1. The **California Republican Party** voted to soften its stance on immigration. (Los Angeles Times)
2. A man suspected of shooting his girlfriend, his infant son and a pastor during a church service in **East Selma**, Ala., was upset over a recent breakup and visitation issues with his son, police said. The victims are in stable condition, and the 26-year-old alleged perp is in custody after members of the congregation wrestled the gun away. (AP)
3. **Apple** acknowledged that a tool used by software developers for the company's devices was copied and modified by hackers to put bad code into apps available on the App Store.
4. **Volkswagen** has halted U.S. sales of popular diesel-powered cars and issued a sweeping apology after it emerged that the company programmed its engines to cheat on emissions tests. (WSJ)
5. The radical leftist party that stormed to a historic victory in January and then governed **Greece** through a tumultuous seven months, called Syriza, won a convincing new mandate in Sunday elections. (Griff White reports from Athens)
6. American soldiers and Marines have been instructed not to intervene when they see **Afghanistan** commanders, including allies, abuse young boys, the New York Times reports on A1 today.
7. **Chinese** President Xi Jinping will work hard to woo U.S. businesses during his U.S. visit, which begins today in Seattle. He'll meet with executives of several technology companies.
8. **Saudi Arabia** has deployed 100,000 security personnel to oversee the Islamic hajj pilgrimage that begins tomorrow, according to the Interior Ministry, underscoring threats facing the annual event that draws about 3 million people. (ABC)
9. Yemen's Shiite **Houthi rebels** have released six foreign hostages, including two Americans, and flown them to the Gulf country of Oman, which helped negotiate their release. (AP)
10. **U.S. Fish and Wildlife Service** agents are investigating a report that 25 walruses were illegally shot and beheaded for their ivory off the coast of Alaska. (Alaska Daily News)

POWER PLAYERS IN THE NEWS:

1. The United States will increase its cap on the number of refugees it admits and resettles to 85,000 in the coming fiscal year and to 100,000 in 2017, **John Kerry** announced in Berlin. In Germany, meanwhile, **Angela Merkel's** coalition finds itself increasingly at odds over what to do about the crisis. (Carol Morello)
2. **Jill Biden** is "100 percent on board" with her husband running for president, NBC News reports, adding that such a bid "looks more likely by the day."
3. **Jesse Jackson, Jr.** has completed his 30-month sentence for misusing about $750,000 in campaign funds. His wife, **Sandi**, now must surrender in 30 days. (Chicago Tribune)
4. **Debbie Wasserman Schultz**, the DNC chairwoman, was heckled by activists who want more debates during the New Hampshire Democratic Party convention. (John Wagner)

SUNDAY SHOW ROUND-UP:

— Ben Carson said on "Meet the Press" that he wouldn't support a Muslim president of the U.S., arguing that Islam is incompatible with the Constitution. "I would not advocate that we put a Muslim in charge of this nation," he said on NBC. "I absolutely would not agree with that." Twitter quickly ridiculed him.

- **Trump**, meanwhile, said that he "loves the Muslims" and would consider one as a running-mate or as part of his cabinet. But, he added, "we do have a problem with radical Muslims."
- In Iowa, **Ted Cruz** said it would be unconstitutional to exclude a Muslim from the presidency. (Des Moines Register)
- **Rand Paul** suggested the idea is difficult but said electing the president should be about policy. "I try to see that as a separate thing, someone's religion," the Kentucky senator said on CBS. "I just think it's hard for us. We were attacked by people who were all Muslim."
- **Rubio was the adult in the room.** "He's born in the United States; he's a Christian," the Floridian said on ABC. "He's the president of the United States for the next year and a half, and we're going to move on."

Watch the video of Carson's comment:

(NBC via CNN)

— Hillary Clinton made her first Sunday show appearance in four years on CBS' "Face the Nation." She called for the U.S. to take in 65,000 Syrian refugees and described the attempt to train Syrian rebels a "failed program." She also pledged not to run a negative campaign against **Sanders,** using his name for the first time this campaign. And she said she's "a real person" when host **John Dickerson** asked her to describe herself in "three words," with "all the pluses and minuses that go along with being that." Watch the video:

(Face the Nation on CBS)

— Ohio Gov. John Kasich announced he would sign a controversial bill to ban abortions because the baby would have Down's Syndrome. He also said the Senate should invoke the "nuclear option" to try killing the Iran deal. "It ought to be decided by 51 votes, not by 60 votes or some filibuster," he said on CNN.

— Languishing in the single digits, Jeb Bush has departed from his early strategy and now links himself more closely than ever with his brother. He tweeted at Hillary Clinton yesterday, calling on her to condemn a "disgraceful" attack ad from Americans United for Change, a liberal group attacking him for his claim during the debate that George W. Bush kept the U.S. safe. The tweet, widely circulated by his press staff, draws far more attention to the small buy than the liberal interest group could ever hope for; it's a calculated strategy to galvanize the right. On foreign policy, Jeb said Friday: "I know how to do this because, *yes, I am a Bush.* I happened to see two really good presidents develop relationships with other countries."

WAPO HIGHLIGHTS:

— "Obama has vastly changed the face of the federal bureaucracy," by Juliet Eilperin: "Obama has presided over the most demographically diverse administration in history, according to a new analysis of his top appointments. *The majority of top policy appointments within the executive branch are held by women and minorities for the first time in history* … University of California at Berkeley law school professor Anne Joseph O'Connell has compiled a

database … O'Connell said that her research reveals that Obama has placed women and minorities in 53.5 percent of those posts. His predecessor, President George W. Bush, by contrast, installed women and minorities in 25.6 percent, while President Clinton's number was 37.5 percent."

— **"Disillusioned and self-deluded, Bowe Bergdahl vanished into brutal captivity," by Dan Lamothe:** "Looking to make a stand, Bergdahl hatched a plan: He would run away from his platoon's tiny outpost in Paktika province late on June 29, 2009. He would stay away from the Army a day, maybe two, and then reappear about 19 miles away at a larger installation and demand to air his grievances with a general. He knew that the region was crawling with insurgents, but he had 'outsize impressions of his own capabilities,' according to an investigating officer, and was determined to create enough chaos to get the attention of senior commanders. Those were among the details that emerged in a preliminary hearing here late last week."

— **The five things standing in the way of the government staying open after Sept. 30,** via PowerPost's Kelsey Snell: 1. We're running out of Time; 2. Presidential candidates are showboating; 3. Conservatives don't trust leadership; 4. The fight is no longer just about Planned Parenthood; 5. Republicans really want to force Obama to use his veto pen.

— **John Boehner** manages to hold on to his job as speaker in part because it's such a thankless job. (Mike DeBonis)

SOCIAL MEDIA SPEED READ:

— ZIGNAL VISUAL: Trump again dominates the online conversation after temporary drop-off in the wake of the debate. The GOP presidential contest went back to its pre-debate norm over the weekend, with Trump dominating the chatter among the Republican field. Nearly six out of 10 mentions of all the GOP contenders mentioned Trump, according to our analytics partners at Zignal Labs. Here's a breakdown of the share of voice.

The Fiorina "bounce," such as it is, was still evident, particularly on

television. The former HP CEO commanded about 13 percent of all GOP presidential mentions, one-third of what Trump got:

–Pictures of the day:

Friends and family mourned White House staffer Jake Brewer, 34, who died Saturday in a bicycling accident in Howard County. Brewer is pictured below with wife Mary Katharine Ham, editor-at-large of Hot Air and a contributor at Fox News. "We lost our Jake yesterday, and I lost part of my heart and the father of my sweet babies," Ham wrote on Instagram. President Obama also released a statement, saying he was "heartbroken" at Brewer's death. "Simply put, Jake was one of the best," Obama said.

(mkhammertime)

Hugh Hewitt shared a photo from inside Washington's Cathedral of St. Matthew the Apostle, where Francis will lead mass this week:

(@hughhewitt)

Green room awkwardness … Rand Paul bumped into Hillary at the studio for CBS's "Face the Nation." He posted a photo and encouraged followers to tune in to his interview to learn "why I think she should forever be precluded from being potus":

(@RandPaul)

–Tweets of the day:

Trump pushed back on criticism that he should have corrected a town hall attendee who said President Obama is a Muslim and not an American:

(@realDonaldTrump)

Sen. Charles Schumer (D-N.Y.) congratulated second cousin Amy Schumer for her Emmy victory:

(@SenSchumer)

Jeb Bush mingled with Bulldog fans at the University of Georgia (in case you were wondering, Georgia won against South Carolina 52-20):

(@JebBush)

Finally, in the category of not-a-joke, the White House celebrated Talk Like a Pirate Day:

(@WhiteHouse)

–Instagrams of the day:

Joe Scarborough and Mika Brzezinski took a selfie at the wedding of Morning Joe senior producer Louis Burgdorf in Southampton, N.Y.:

(mikabrzezinski)

Anderson Cooper joined Madonna on stage Saturday night during her Rebel Heart Tour stop in Brooklyn:

(andersoncooper / markdoctrow)

Grammy award-winner Judy Collins sang the national anthem at Sunday's Nats game against the Miami Marlins:

(nationals)

And Ashley Judd appears to have brought her pup Shug to the White House on Friday, where she joined President Obama for a screening of a documentary on criminal justice reform. "Shug life. 'Mom's waiting for #POTUS. I'm waiting for Mom,'" she wrote:

(ashley_judd)

GOOD READS FROM ELSEWHERE:

— New York Times, "Carly Fiorina aims to foil attacks on her record as CEO," by Amy Chozick and Quentin Hardy: "Looking intently into the [debate] camera, Mrs. Fiorina said a prominent venture capitalist who pushed for her firing at Hewlett-Packard in 2005 had recently taken out a full-page newspaper ad saying that he had been wrong to do so and that she had been 'a terrific C.E.O.' What Mrs. Fiorina did not mention was that the ad — which cost roughly $140,000 — was paid for by the "super PAC" supporting her presidential candidacy. The same group, Carly for America, has gathered video footage of the venture capitalist, Thomas J. Perkins, praising Mrs. Fiorina, and it could be used in television or Internet ads in the weeks ahead. The moves are part of an extensive effort by Mrs. Fiorina and her supporters to redefine her rocky business reputation and fend off attacks on her as an unfit and heartless executive."

— Wall Street Journal, "Catholic church grapples with growth and decline," by Tamar Audi: "The U.S. Catholic Church is expanding quickly in the South and West, largely driven by immigrants from Latin America filling pews in Atlanta, Houston and in Southern California. Meanwhile, the church is contracting in the East and upper Midwest, where historic Catholic strongholds like Boston, Detroit and New York City are closing parishes as population or attendance declines. The result: Old-line dioceses are battling to keep their doors open, even as fast-growing ones are scrambling to meet the needs of the growing faithful."

— Philly.com, "The making of Pope Francis," by Austen Ivereigh: "The figure who always looms largest in Francis' telling is Mario's mother, the pope's grandmother, Rosa Margarita Vassallo. She was a humble-born, well-read, devout and compassionate woman with finely honed political instincts. List those qualities, and you realize how much of Rosa her grandson has inherited…Growing up with the stories of his family's trials and fresh starts, Jorge [now Pope Francis] would always have a special concern for vulnerable migrants. As cardinal, he had a close bond with Paraguayans and Bolivians in the slums of Buenos Aires, and he has made making room for the stranger a cornerstone of his teaching as pope, insisting that anti-immigrant countries that tighten or close their borders simply turn nearby oceans and deserts into

cemeteries for those who die trying to get there…Rosa remained the love of the future pope's life. Many years later…Francis would visit her in the Buenos Aires nursing home where she was cared for by Italian nuns. 'He adored her. She was his weakness,' the nuns remembered. They recall the night she died, when Francis, then a Jesuit priest, held her body until her final breath."

HOT ON THE LEFT

Lawmakers want to make Stonewall Inn a national park. From the Associated Press: "Two New York legislators are leading a campaign to designate Stonewall Inn as the first national park honoring LGBT history. Sen. Kirsten Gillibrand and U.S. Rep. Jerrold Nadler made their announcement Sunday in front of the Greenwich Village tavern that was the scene of a 1969 uprising at a key moment for the nascent gay rights movement. 'When we look at our country, we have recognized women's rights, civil rights, all kinds of rights,' Gillibrand said."

HOT ON THE RIGHT

Huckabee slams Obama's choice of gay nominee to lead Army. From the Washington Times: "Republican presidential hopeful Mike Huckabee slammed President Obama's choice of an openly gay official to lead the Army as an attempt at 'appeasing America's homosexuals' … saying the nomination of Eric Fanning as Army secretary ignores the suicide rates among veterans and the readiness of the U.S. armed forces. 'It's clear President Obama is more interested in appeasing America's homosexuals than honoring America's heroes,' Huckabee said."

DAYBOOK:

— What's happening today on the campaign trail: Hillary Clinton attends grassroots organizing events in Baton Rouge, La. and Little Rock, Ark. Donald Trump gives another interview to Hugh Hewitt. Two candidates appear on evening talk shows: Carly Fiorina on the "Tonight Show" with Jimmy Fallon, and Ted Cruz on the "Late Show" with Stephen Colbert. In Houston, Jeb Bush speaks at the United States Hispanic Chamber of Commerce National Convention. Marco Rubio campaigns in Atlanta, Ga., and Charlotte, N.C. Rand Paul rallies with

student supporters at American University in D.C. Finally, in Iowa, Rick Santorum holds an event in Council Bluffs while Bobby Jindal campaigns in Keosauqua and Washington.

–On the Hill: The House is not in session. The Senate convenes at 2 p.m. to resume work on the motion to proceed to the Pain-Capable Unborn Child Protection Act.

–At the White House: President Obama has no public events scheduled. Vice President Biden delivers remarks at the White House Champions of Change Law Enforcement and Youth Meeting and the U.S.-India Strategic and Commercial Dialogue Reception.

QUOTE OF THE DAY: "Garbage men get used to the smell of bad garbage. Prisoners learn how to become prisoners, all right?" John Boehner said this weekend in an interview with Politico's Jake Sherman. "You can teach yourself to do anything, especially if you're committed to a cause."

NEWS YOU CAN USE IF YOU LIVE IN D.C.:

— **After a week of mostly sunny days, we're certainly due for the cloudy weather expected into Tuesday.** "For our moisture-deprived trees, lawns and gardens, some rain sure would be nice to go along with the clouds. Although we may have some showers today, they're unlikely to amount to much. Then, on Tuesday, we start drying out again and any rain chances later this week are very iffy," per the Capital Weather Gang.

— New rules will make Uber and Lyft trips at both Dulles and DCA cost $4 more per trip. The Metropolitan Washington Airports Authority mandated that the fee get charged for trips both to and from the airports, but MWAA said it will create areas where the vehicles can pick up and drop off customers. This should help further weaken the power of the taxi cartels.

— The Redskins beat the St. Louis Rams, 24-10, in what is being hailed as a victory for Coach Jay Gruden's strategy.

— The Nationals "stomped" the Miami Marlins, 13-3, keeping dim playoff hopes alive for fans.

— **Here are some tips for using the just-opened Silver Spring Transit Center,** if you come into the District from Maryland.

VIDEOS OF THE DAY:

— **Andy Samberg** mocked Trump in a very funny opening monologue of the Emmy's and joked that Sanders "always looks like his flight is delayed." Watch clips here.

— The Guardian obtained grainy footage that appears to show Marco Rubio's deputy campaign manager, **Rich Beeson**, hitting Rand Paul's national political director **John Yob** in the face. "I am hereby calling on Marco Rubio to fire Rich Beeson immediately," Yob tweeted in the aftermath of the incident. Watch the video here and read more details here.

— **Bernie** went back and forth with Stephen Colbert over the term "socialist":

(The Late Show with Stephen Colbert)

To: Caldwell, Amy[caldwell.amy@epa.gov]; Wasenko, Barbara[Wasenko.Barbara@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Betty Stendel[stendel.betty@epa.gov]; Kolowich, Bruce[kolowich.bruce@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Mylan, Christopher[Mylan.Christopher@epa.gov]; Haugen, David[haugen.david@epa.gov]; Miller, Debra L.[Miller.DebraL@epa.gov]; Watkins, Erica[Watkins.Erica@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Galano, Fidel[Galano.Fidel@epa.gov]; Johnson, Francene[Johnson.Francene@epa.gov]; Stewart, Gwen[Stewart.Gwen@epa.gov]; Jones, Jacqueline[Jones.Jacqueline@epa.gov]; Blubaugh, Jim[Blubaugh.Jim@epa.gov]; Weihrauch, John[Weihrauch.John@epa.gov]; Iffland, JoNell[Iffland.JoNell@epa.gov]; Berrier, Judi[Berrier.Judi@epa.gov]; Greuel, Justin[Greuel.Justin@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Sargeant, Kathryn[sargeant.kathryn@epa.gov]; Vawters, Katie[Vawters.Katie@epa.gov]; Derksen, Kimberly[derksen.kimberly@epa.gov]; Cook, Leila[cook.leila@epa.gov]; McQueen, Lyndia[mcqueen.lyndia@epa.gov]; Le, Madison[Le.Madison@epa.gov]; Peralta, Maria[Peralta.Maria@epa.gov]; Brusstar, Matt[brusstar.matt@epa.gov]; Michael Horowitz[horowitz.michael@epa.gov]; Sabourin, Michael[sabourin.michael@epa.gov]; Haley, Mike[Haley.Mike@epa.gov]; Cooper, Nanette[cooper.nanette@epa.gov]; Paff, Patricia[paff.patricia@epa.gov]; Shaffer, Patricia[Shaffer.Patricia@epa.gov]; Argyropoulos, Paul[Argyropoulos.Paul@epa.gov]; Curtis, Rhonda[Curtis.Rhonda@epa.gov]; Larson, Robert[larson.robert@epa.gov]; Waite, Sherry[waite.sherry@epa.gov]; Patterson, Susan[Patterson.Susan@epa.gov]; Nelson, Suzanne[nelson.suzanne@epa.gov]; Meekins, Tanya[Meekins.Tanya@epa.gov]; Moore, Theresa[Moore.Theresa@epa.gov]; Bradish, Tracey[bradish.tracey@epa.gov]
Cc: Gonzalez, Gail[Gonzalez.Gail@epa.gov]; White, SharonB[White.SharonB@epa.gov]
From: Stewart, Gwen
Sent: Mon 9/21/2015 12:09:51 PM
Subject: Grundler, Christopher Calendar
Grundler Christopher Calendar.ics

CHRISTOPHER GRUNDLER

MONDAY, SEPTEMBER 21, 2015

CALENDAR

DC OFFICE

7:30 AM – 9:30 AMBreakfast Meeting with Robbie Diamond

Non-Responsive

10:00 AM – 10:30VW Meeting
AM
Location: RM. 6520 DC/RM. C-174 DOD
AA

Non-Responsive

Gwen Stewart

Office of Transportation and Air Quality

202 564-1682 – Telephone

202 564-1686 – Fax Number

Stewart.gwen@epa.gov

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: energy@morningconsult.cpro30.com
Sent: Mon 9/21/2015 12:35:23 PM
Subject: Morning Consult Energy, Presented by the American Coalition for Clean Coal Electricity: House GOP Member(s) to Boycott Pope's Address; EPA Says Volkswagen Purposefully Evaded Air Pollution Laws

By Davis Burroughs

Today's Washington Brief

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Will Dobbs-Allsopp and Davis Burroughs, Morning Consult

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As Shutdown Looms, Democrats Promote National Parks
National Journal

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U.S. Stock-Index Futures Advance as Investors Weigh Fed Comments
Alan Soughley Sofia Horta E Costa, Bloomberg News

U.S. stock-index futures advanced as investors weighed statements from Federal Reserve officials amid concerns about global growth and the strength of the world's biggest economy.

Oil & Natural Gas

Oil prices edge up as U.S. drilling declines
Henning Gloystein, Reuters

Oil prices edged up in early trading in Asia on Monday as U.S. drilling slowed and analysts estimated that $1.5 trillion worth of planned American production was uneconomical at prices of $50 per barrel or lower.

Shale drillers spending most of their cash paying off high debt
Collin Eaton, Houston Chronicle

After a credit-fueled energy boom and a punishing downturn, U.S. shale drillers now spend the vast majority of their operating cash flow paying off the debt they took out to expand their drilling.

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Utilities & Infrastructure

Puerto Rico Utility Fails to Extend Contract With Insurers

Michael Kaske, Bloomberg News

Puerto Rico's main electricity provider failed to extend a contract with its bond insurers that has given the power company time to negotiate a way to restructure its $8.3 billion of debt.

NRG's GreenCo Plan Echoes Clean-Power Shift in Germany
Brian Eckhouse and Mark Chediak, Bloomberg News

NRG Energy Inc.'s decision to create a new unit for renewable energy operations should look familiar to anyone who's been watching the utility industry in Europe.

Renewables

After years of theorizing, the hydrogen economy is emerging from excess wind power in Germany
Eric Marx, E&E

Germany has taken the lead in the international effort to develop the so-called hydrogen economy, focusing on ways to convert electricity from renewable energy sources, such as wind power — which is sometimes so plentiful it is dumped — into hydrogen that can be stored and used for a variety of purposes, beginning with fuel-cell-powered cars and buses.

Coal

As Coal Prices Slump, New Hope Mulls New Ventures
Rhiannon Hoyle, The Wall Street Journal

Tumbling commodity prices are prompting many global miners to spread their bets. However, few companies are going as far as New Hope Corp.—one of Australia's largest-listed coal miners—in considering moves into cattle breeding and property development.

Nuclear

Britain Says It Will Aid Planned Nuclear Plant
Stanley Reed, The New York Times

Britain said it would provide £2 billion as the government courted Chinese companies to help finance the new Hinkley Point station.

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The Rehab of a Global Warming 'Disaster'
Ben Geman, National Journal

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Popular pope comes with a climate change message that Congress may not wants to hear
Malavika Vyawahare, E&E

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Opinions, Editorials & Perspectives

What comes to mind when you read the words "energy efficiency?" And what you might be missing
Scott DePasquale, Bloomberg View

Working in combination, American consumers and industry are an unstoppable force. Take, for example, the case of recycling. In 1980, Americans recycled only 10 percent of municipal waste; today, that rate stands at about 34 percent. We achieved this in part by changing our behavior and taking small actions within our homes and workplaces that ensured less waste goes to the landfill.

Seven Years of Unforced Errors on Keystone XL
Linda Rozett, Medium

Seven years ago, TransCanada asked the federal government to approve a permit to build a pipeline to move Canadian oil sands crude and oil from the U.S. Bakken region to refineries on the Gulf Coast… Yet, after 2,555 days, the Keystone XL pipeline still awaits approval.

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Dan York et al., American Council for an Energy-Efficient Economy

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From: energy@morningconsult.cpro30.com
Sent: Mon 9/21/2015 12:35:31 PM
Subject: Morning Consult Energy, Presented by the American Coalition for Clean Coal Electricity: House GOP Member(s) to Boycott Pope's Address; EPA Says Volkswagen Purposefully Evaded Air Pollution Laws

By Davis Burroughs

Today's Washington Brief

- Rep. Paul Gosar said he would not attend Pope Francis's address to Congress on Thursday in order to protest the pontiff's view on climate change, and the Arizona Republican predicts he won't be alone in boycotting the speech. (The Hill)

- With Congress narrowing in on a deal to avert a government shutdown, no energy bills are expected to make it to the floor this week; however, Pope Francis may talk about climate change when he addresses a joint session of Congress on Thursday. (Morning Consult)

- While the 2009 climate talks in Copenhagen failed to produce an international treaty on climate change, negotiators are hopeful they can learn from past mistakes and reach a pact that would stave off the worst effects of global warming when they meet again in Paris in December. (National Journal)

Today's Business Brief

- The Environmental Protection Agency accused Volkswagen of purposely evading air pollution laws, prompting the German automaker's chief executive officer to publicly apologize and order an external investigation. (The Washington Post)

- U.S. Shale drillers are using their cash reserves, stockpiled after years of expansion, to pay off debt they incurred to expand their operations during the start of the shale oil and gas boom. (Houston Chronicle)

- Though the August employment report conveyed good news for most of the country, falling oil prices and lower demand for coal took a toll on energy-producing states. Texas, for example, lost 13,700 jobs, while West Virginia's unemployment rate inched up to 7.6 percent. (Associated Press)

Today's Chart Review

The 800 Ways Taxpayer Money Supports Fossil Fuel Industries
Bloomberg News

Mark Your Calendars (All Eastern Times)

Monday
Conference on ecology & transportation @ 7 a.m.
ACEE national conference on energy efficiency @ 8 a.m.
API conference on federal taxes that affect the oil & gas industry @ 8:30 a.m.
Brookings discussion on U.S.-Chinese relations in historical context @ 9:30 a.m.
Heritage discussion on how climate policy affects the poor @ 12 p.m.
NRC public meeting regarding Exelon's activities at Oyster Creek Nuclear Generating Station @ 12:30 p.m.
Columbia Center on Global Energy Policy panel on meeting China's climate goals @ 12:30 p.m.
Wilson Center Global Energy Forum @ 1:15 p.m.
FERC public meeting on Oregon LNG Terminal & Pipeline Project @ 4 p.m.

Tuesday
Conference on ecology & transportation @ 7:30 a.m.
Center for Offshore Safety forum @ 8:30 a.m.
ACEE national conference on energy efficiency @ 8 a.m.
API conference on federal taxes that affect the oil & gas industry @ 8 a.m.
Politico event titled "What Works D.C." @ 8 a.m.
NRC public meeting on operator licensing for new reactors @ 8:30 a.m.
C2ES event on climate change resilience in business @ 9 a.m.
RTI forum on shale oil and gas @ 9 a.m.
FERC settlement conference for Duke Energy Carolinas @ 10 a.m.
USEA briefing on global gas markets @ 10:30 a.m.
CESA webinar on tax credits for community solar @ 1 p.m.
FERC public meeting on Oregon LNG Terminal & Pipeline Project @ 9 p.m.

Wednesday
Conference on ecology & transportation @ 6 a.m.
Center for Offshore Safety forum @ 8 a.m.
Sen. Homeland Security Regulatory Affairs Subcommittee hearing on agencies' use of regulatory guidance @ 11 a.m.
AWEA webinar on yieldcos @ 12 p.m.
NRC public meeting on the proposed fuel cycle cybersecurity rule @ 3 p.m.
FERC public meeting on Oregon LNG Terminal & Pipeline Project @ 9 p.m.

Thursday

Conference on ecology & transportation @ 7:30 a.m.
NRC public meeting on proposed Emergency Preparedness FAQs @ 8:30 a.m.
AWEA webinar on recommended practices for turbine end-of-warranty inspections @ 12 p.m.
Heritage discussion of Xi Jinping's upcoming visit @ 3 p.m.
FERC public meeting on Oregon LNG Terminal & Pipeline Project @ 9 p.m.

Friday
NRC public meeting on the Revised Fuel Cycle Oversight Process @ 8:30 a.m.
CSIS discussion of global natural gas markets @ 10 a.m

General

EPA: Volkswagen used 'defeat device' to illegally skirt air-pollution controls
Joby Warrick, The Washington Post

Volkswagen deliberately circumvented pollution controls by installing special software on Volkswagen and Audi models, EPA says.

Republican predicts he won't be alone with pope boycott
Cristina Marcos, The Hill

More than one lawmaker may end up boycotting Pope Francis's much-anticipated address to Congress on Thursday, according to the Republican lawmaker who announced he was skipping the speech. Catholic Rep. Paul Gosar (R-Ariz.) made waves Friday when he announced he'd boycott Pope Francis's speech to protest the pontiff's views on climate change.

The Coming Week: Little Time for Big Questions on Funding Government
Will Dobbs-Allsopp and Davis Burroughs, Morning Consult

The Iran nuclear deal has put pressure on lawmakers to act on oil exports so that the United States can compete on an even playing field with Iran. A bill to lift the ban on exporting crude oil passed the House Energy and Commerce committee Thursday, and House Majority Leader Kevin McCarthy (R-Calif.) indicated earlier in the week that the full chamber could vote on the bill "in the coming weeks."

Jobless rates fall in 29 states in August amid job gains
Christopher Rugaber, The Associated Press

Unemployment rates fell in 29 states in August and held steady in 11 as hiring

remained solid nationwide. Falling oil and coal prices continued to take a toll on energy-producing states.

As Shutdown Looms, Democrats Promote National Parks
National Journal

As Con-gress hurtles to-ward the gov-ern-ment fund-ing dead-line with no solu-tion in sight, House Demo-crats are draw-ing more at-ten-tion to the ul-ti-mate shut-down sym-bol—na-tion-al parks.

U.S. Stock-Index Futures Advance as Investors Weigh Fed Comments
Alan Soughley Sofia Horta E Costa, Bloomberg News

U.S. stock-index futures advanced as investors weighed statements from Federal Reserve officials amid concerns about global growth and the strength of the world's biggest economy.

Oil & Natural Gas

Oil prices edge up as U.S. drilling declines
Henning Gloystein, Reuters

Oil prices edged up in early trading in Asia on Monday as U.S. drilling slowed and analysts estimated that $1.5 trillion worth of planned American production was uneconomical at prices of $50 per barrel or lower.

Shale drillers spending most of their cash paying off high debt
Collin Eaton, Houston Chronicle

After a credit-fueled energy boom and a punishing downturn, U.S. shale drillers now spend the vast majority of their operating cash flow paying off the debt they took out to expand their drilling.

The 800 Ways Taxpayer Money Supports Fossil Fuel Industries
Reed Landberg, Bloomberg News

As world leaders converge on New York for a United Nations gathering that's expected to have a strong emphasis on climate change, the OECD is pointing out 800 ways rich industrial nations support fossil fuels with taxpayer money, along with a handful of countries that are catching up quickly.

Utilities & Infrastructure

Puerto Rico Utility Fails to Extend Contract With Insurers

Michael Kaske, Bloomberg News

Puerto Rico's main electricity provider failed to extend a contract with its bond insurers that has given the power company time to negotiate a way to restructure its $8.3 billion of debt.

NRG's GreenCo Plan Echoes Clean-Power Shift in Germany
Brian Eckhouse and Mark Chediak, Bloomberg News

NRG Energy Inc.'s decision to create a new unit for renewable energy operations should look familiar to anyone who's been watching the utility industry in Europe.

Renewables

After years of theorizing, the hydrogen economy is emerging from excess wind power in Germany
Eric Marx, E&E

Germany has taken the lead in the international effort to develop the so-called hydrogen economy, focusing on ways to convert electricity from renewable energy sources, such as wind power — which is sometimes so plentiful it is dumped — into hydrogen that can be stored and used for a variety of purposes, beginning with fuel-cell-powered cars and buses.

Coal

As Coal Prices Slump, New Hope Mulls New Ventures
Rhiannon Hoyle, The Wall Street Journal

Tumbling commodity prices are prompting many global miners to spread their bets. However, few companies are going as far as New Hope Corp.—one of Australia's largest-listed coal miners—in considering moves into cattle breeding and property development.

Nuclear

Britain Says It Will Aid Planned Nuclear Plant
Stanley Reed, The New York Times

Britain said it would provide £2 billion as the government courted Chinese companies to help finance the new Hinkley Point station.

Climate

The Rehab of a Global Warming 'Disaster'
Ben Geman, National Journal

It's fair to say that the 2009 United Na-tions cli-mate con-fer-ence in Copen-ha-gen is not fondly re-membered… Six years later, the most im-port-ant round of United Na-tions glob-al-cli-mate talks since Copen-ha-gen loom in Par-is, where ne-go-ti-at-ors hope to reach a fi-nal in-ter-na-tion-al pact to knock the plan-et off the path of warm-ing pro-jec-tions that sci-ent-ists warn will bring cata-stroph-ic dangers.

Popular pope comes with a climate change message that Congress may not wants to hear
Malavika Vyawahare, E&E

Pope Francis, the 266th pope and the leader of more than 1 billion Catholics across the world, will begin a six-day visit to the United States on Tuesday, which will include a historic address to Congress, the first time in the history of the country that a pope will address lawmakers.

Carbon Pricing Poised for More Rapid Adoption, World Bank Says
Matthew Carr, Bloomberg News

Carbon-pricing mechanisms such as markets and taxes are set for "widespread and rapid" use in the years after the Paris climate talks as more nations are seen adopting them as incentives for cleaner energy, according to the World Bank.

A Message from the American Coalition for Clean Coal Electricity:

Supporting energy policies that raise prices on consumers is a political loser. Thirty-six Members of Congress lost their seats after voting for the highly unpopular 2009 cap and trade legislation. Now cap and trade is back in the form of President Obama's costly and illegal carbon plan. Find out what history holds for supporters of costly carbon policies like the president's plan.

Opinions, Editorials & Perspectives

What comes to mind when you read the words "energy efficiency?" And what you might be missing
Scott DePasquale, Bloomberg View

Working in combination, American consumers and industry are an unstoppable force. Take, for example, the case of recycling. In 1980, Americans recycled only 10 percent of municipal waste; today, that rate stands at about 34 percent. We achieved this in part by changing our behavior and taking small actions within our homes and workplaces that ensured less waste goes to the landfill.

Seven Years of Unforced Errors on Keystone XL
Linda Rozett, Medium

Seven years ago, TransCanada asked the federal government to approve a permit to build a pipeline to move Canadian oil sands crude and oil from the U.S. Bakken region to refineries on the Gulf Coast… Yet, after 2,555 days, the Keystone XL pipeline still awaits approval.

Opinions versus facts on climate change
Ken Cohen, ExxonMobil Perspectives

The late Daniel Patrick Moynihan famously said: "Everyone is entitled to his own opinion, but not his own facts." Moynihan's wisdom is apparently lost on some in the climate change activist community.

Jerry Brownout
Alex Epstein, Forbes

A few months ago, after a trip to Texas, I took an Über home from John Wayne Airport in Orange County, Calif. The driver found out where I had been and what I write about, he immediately asked: "Is it true that in Texas they're paying only $2.50 a gallon? I'm paying almost $4 here. This is really bad for my business. Why is it happening?" There are a lot of factors, I responded, but the bottom line is this: we live in a state where the government, including the governor, is not focused on making energy abundant and affordable but rather "green"—which, in practice, means unreliable and expensive.

A Message from the American Coalition for Clean Coal Electricity:

President Obama's costly carbon plan is nothing more than a redo of his failed 2009 cap and trade legislation. This illegal plan is the most overreaching energy regulation in our nation's history and a political loser for any public official that supports it. Cap and trade advocates paid for their support with their seats in 2010. See what's in store for staunch supporters of the president's carbon plan this time around.

Research Reports, Issue Briefs & Case Studies

The Electric Grid: 2030 — How EPA's Power Plant Rule Will Affect the U.S. Transmission Grid
Laura Azar, Azar Consulting

Power plants emit about thirty-seven percent of all carbon dioxide (CO2 or carbon) emissions in the United States. In August 2015, the Environmental Protection Agency (EPA) issued a rule called the Clean Power Plan that aims to reduce national CO2

emissions 32% below 2005 levels by the year 2030. Each state has an individualized target and EPA gives states flexibility in how to achieve those reductions. Three general categories of responses are expected: more efficient use of energy, increased use of lower- or zero-carbon energy, and market-based trading between companies and states. This paper investigates each option.

New Horizons for Energy Efficiency: Major Opportunities to Reach Higher Electricity Savings by 2030
Dan York et al., American Council for an Energy-Efficient Economy

Higher equipment standards and more stringent building codes are squeezing the amount of savings that energy efficiency programs can harvest. No single measure will yield a dominant share of energy savings for utility program portfolios, as have lighting programs in the past. This report examines the next large opportunities for energy efficiency savings. It analyzes 18 measures—including reduction of plug loads, conservation voltage reduction, and smart manufacturing—that could collectively save 22% of total projected electricity use in the year 2030.

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To: Grundler, Christopher[grundler.christopher@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Korotney, David
Sent: Mon 9/21/2015 12:37:01 PM
Subject: VW shares crash 20% on emissions cheating scandal

http://money.cnn.com/2015/09/21/investing/vw-emissions-cheating-shares/index.html

From: Grundler, Christopher
Sent: Friday, September 18, 2015 5:38 PM
To: OAR-OTAQ
Subject: OTAQ In the News

Dear Colleagues,

One of our most important responsibilities is to keep our promises to the public, and secure the benefits of our emission standards. That means making sure everyone plays by the same set of rules, and that mobile source products meet our stringent emissions standards. Today we notified VW that they violated both of these important principles. I encourage you to read the Notice of Violation on our website that describes the facts of this case. I am sure you will be as baffled by this as I am---it is incomprehensible to me that the largest or second largest automaker in the world would act in such a way, and then conceal facts about how their products operate in the real world from both EPA and California. Kudos to our partners in California for taking the lead on the testing, and to Byron and his team's persistent search for the truth about these cars, and being steadfast in refusing to issue certificates until they got the answer. Unfortunately, the answer turned out to be that VW installed software that was designed to defeat our emission standards.

Here is the press release, our website, and a few key articles that came out today.

Thanks for what you do.

Chris

Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

Agency says German auto maker circumvented air-pollution standards with software

By AMY HARDER

WASHINGTON—The U.S. Environmental Protection Agency issued a notice on Friday alleging that Volkswagen AG circumvented air-pollution standards with software installed on nearly a half million cars sold in the U.S. since 2008.

Officials said Volkswagen could face penalties of up to $37,500 per vehicle, or a total of more than $18 billion, though it remained unclear whether the government would eventually levy such a large penalty. Officials said the German auto maker violated the federal Clean Air Act.

The agency said that owners of these cars don't need to take any action right now and that while the cars have emissions exceeding federal standards, "these violations do not present a safety hazard and the cars remain legal to drive," according to the EPA.

Officials said a recall hasn't been announced and an investigation continues. They plan to at some point order Volkswagen to fix the vehicles, officials said.

Top EPA officials made the announcement alongside the California Air Resources Board, which is separately investigating the alleged use of the software, which EPA describes as a "defeat device." The software reduces the effectiveness of a car's emission control system during normal driving conditions and enables the car to emit nitrogen oxides at up to 40 times the allowable standard, according to the EPA.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance at the EPA.

"Volkswagen Group of America Inc., Volkswagen AG and Audi AG received today notice from the U.S. Environmental Protection Agency, U.S. Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen said in a statement. "VW is cooperating with the investigation; we are unable to comment further at this time."

EPA said that its allegations cover roughly 482,000 diesel passenger cars with model years between 2009 and 2015 and sold in the U.S. since 2008. They include the following models: the Jetta, Beetle, Audi A3, Golf and Passat.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the "defeat device" software, Volkswagen was violating two parts of the Clean Air Act.

Detroit News:

http://www.detroitnews.com/story/business/autos/foreign/2015/09/18/epa-vw-diesel-vehicles-violated-emissions-rules/72401296/

EPA: 482K VW diesel vehicles violated emissions rules

David Shepardson

Washington — The Environmental Protection Agency and the state of California said Volkswagen AG violated federal law by allowing 482,000 diesel VW and Audi cars sold since 2009 to evade emissions requirements using sophisticated software.

The announcement is a big setback to the German automaker that has made diesel vehicles a big part of its U.S. strategy. VW could face fines or criminal prosecution and must immediately prevent those vehicles from being able to defeat emissions rules.

VW concealed facts but has now admitted wrongdoing, said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "We expected better from VW," she said.

The agencies allege that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air pollutants. California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board have initiated investigations based on Volkswagen's alleged actions.

EPA said the vehicles software "detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test." The vehicles include diesel Golf, Jetta, Sportwagen, Beetle and Audi A3 vehicles built from 2009-2015.

EPA said "the effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a 'defeat device,' as defined by the Clean Air Act."

NOx pollution contributes to nitrogen dioxide, ground-level ozone, and fine particulate matter. EPA said exposure has been linked to serious health issues, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital.

"Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, the elderly, and people with pre-existing respiratory disease are particularly at risk for health effects of these pollutants," EPA said.

This is the latest example of automakers not following the miles per gallon and emissions rules.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Giles. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said Air Resources Board Executive Officer Richard Corey. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The issue first came to the attention of the agencies in 2014 after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels, and the agencies began further investigations into the issue.

In September, after EPA and CARB demanded an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices, the agencies said.

EPA said VW must recall the vehicles. EPA said "owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

-

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 9/21/2015 12:44:55 PM
Subject: A.M. NEWSCAST: More VW fallout: '15 diesel sales halted, stock plunges, CEO apologizes | UAW's FCA prediction | Mitsubishi factory closing? | Lexus ads get personal

September 21, 2015

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From: Automotive News
Sent: Mon 9/21/2015 12:45:15 PM
Subject: A.M. NEWSCAST: More VW fallout: '15 diesel sales halted, stock plunges, CEO apologizes | UAW's FCA prediction | Mitsubishi factory closing? | Lexus ads get personal

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From: E&E Publishing
Sent: Mon 9/21/2015 1:09:48 PM
Subject: September 21 -- ClimateWire is ready

Read today's ClimateWire on the web

AN E&E PUBLISHING SERVICE

CLIMATEWIRE — Mon., September 21, 2015

READ FULL EDITION

1.BUSINESS:

Ranks of companies setting an internal price on CO2 emissions almost triple in a year

The number of large companies placing an internal price on carbon emissions nearly tripled over the last year, from 150 to 437 firms globally, according to new data released this morning by CDP, the U.K.-based nonprofit that tracks corporate-sector greenhouse gas emissions.

2.AUTOS:

EPA charges that VW installed emissions-control software designed to work only during EPA testing

National and state air regulators, in a notice mailed to Volkswagen AG on Friday, accused the company of installing software in about half a million cars designed to pass federal emissions tests but release higher-than-acceptable levels in everyday driving situations.

TODAY'S STORIES

3.REGULATION:
Does the Clean Power Plan create 'winners' and 'losers' among the states?

4.MARKETS:
World Bank predicts carbon pricing will be the 'backbone' of a global agreement to cut GHG emissions

5.ADAPTATION:
Australia's water architect tests a legal reform to help drought-parched U.S. West

6.FORESTS:
Agriculture giant's deforestation plan draws ire from environmental groups

7.POLICY:
Former oil consultant named environment adviser to British prime minister

8.REGULATION:
Mont. lawmakers express support for Obama carbon plan to governor

9.ADAPTATION:
Miami-Dade funds more sea-level rise adaptation in last-minute budget decision

10.TECHNOLOGY:
British naturalist, others call for crash program to make clean energy cheaper

E&E INTERACTIVE

11.CLEAN POWER PLAN:
Pa., Mo. kick off listening sessions, stakeholder meetings

E&ETV'S ONPOINT

12.ENERGY EFFICIENCY:
DOE's Greenwald discusses agency road map to double energy productivity

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Ramsey, Michael
Sent: Mon 9/21/2015 1:25:33 PM
Subject: Hi from the WSJ

Hey Chris - Mike Ramsey here. I haven't been doing the bulk of the VW coverage but I had a question. When I did that analysis a few years ago on how window stickers compare with real world results - diesels were the big outliers, I know you guys knew this and I think you said at the time you were studying that. Was that the genesis of the investigation? If so - I'd like to talk to you about it.

Sent from my iPhone

To: McCabe, Janet[McCabe.Janet@epa.gov]; Purchia, Liz[Purchia.Liz@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Reynolds, Thomas[Reynolds.Thomas@epa.gov]; Millett, John[Millett.John@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 1:34:16 PM
Subject: Fwd: VW shares crash 20% on emissions cheating scandal

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Begin forwarded message:

From: "Korotney, David" <korotney.david@epa.gov>
Date: September 21, 2015 at 8:37:01 AM EDT
To: "Grundler, Christopher" <grundler.christopher@epa.gov>, "Bunker, Byron" <bunker.byron@epa.gov>
Subject: VW shares crash 20% on emissions cheating scandal

http://money.cnn.com/2015/09/21/investing/vw-emissions-cheating-shares/index.html

From: Grundler, Christopher
Sent: Friday, September 18, 2015 5:38 PM
To: OAR-OTAQ
Subject: OTAQ In the News

Dear Colleagues,

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Thanks for what you do.

Chris

Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

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By AMY HARDER

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The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the "defeat device" software, Volkswagen was violating two parts of the Clean Air Act.

Detroit News:

http://www.detroitnews.com/story/business/autos/foreign/2015/09/18/epa-vw-diesel-vehicles-violated-emissions-rules/72401296/

EPA: 482K VW diesel vehicles violated emissions rules

David Shepardson

Washington — The Environmental Protection Agency and the state of California said Volkswagen AG violated federal law by allowing 482,000 diesel VW and Audi cars sold since 2009 to evade emissions requirements using sophisticated software.

The announcement is a big setback to the German automaker that has made diesel vehicles a big part of its U.S. strategy. VW could face fines or criminal prosecution and must immediately prevent those vehicles from being able to defeat emissions rules.

VW concealed facts but has now admitted wrongdoing, said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "We expected better from VW," she said.

The agencies allege that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air pollutants. California is separately issuing an In-Use Compliance letter to Volkswagen, and

EPA and the California Air Resources Board have initiated investigations based on Volkswagen's alleged actions.

EPA said the vehicles software "detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test." The vehicles include diesel Golf, Jetta, Sportwagen, Beetle and Audi A3 vehicles built from 2009-2015.

EPA said "the effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a 'defeat device,' as defined by the Clean Air Act."

NOx pollution contributes to nitrogen dioxide, ground-level ozone, and fine particulate matter. EPA said exposure has been linked to serious health issues, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. "Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, the elderly, and people with pre-existing respiratory disease are particularly at risk for health effects of these pollutants," EPA said.

This is the latest example of automakers not following the miles per gallon and emissions rules.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Giles. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said Air Resources Board Executive Officer Richard Corey. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The issue first came to the attention of the agencies in 2014 after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels, and the agencies began further investigations into the issue.

In September, after EPA and CARB demanded an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices, the agencies said.

EPA said VW must recall the vehicles. EPA said "owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

-

-

To: Belser, Evan[Belser.Evan@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]
Cc: Conger, Nick[Conger.Nick@epa.gov]; Milbourn, Cathy[Milbourn.Cathy@epa.gov]; Allen, Laura[Allen.Laura@epa.gov]; Hull, George[Hull.George@epa.gov]; Valentine, Julia[Valentine.Julia@epa.gov]; Millett, John[Millett.John@epa.gov]; Senn, John[Senn.John@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Orehowsky, Gregory
Sent: Mon 9/21/2015 1:44:15 PM
Subject: RE: Conflicting EPA information on VW Passat

In 2012, the Passat was first certified with SCR.

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

From: Belser, Evan
Sent: Sunday, September 20, 2015 3:47 PM
To: Birgfeld, Erin
Cc: Conger, Nick; Milbourn, Cathy; Allen, Laura; Hull, George; Valentine, Julia; Millett, John; Senn, John; Kaul, Meetu; Orehowsky, Gregory; Dalton, Joel; Wehrly, Linc; Bunker, Byron; Werner, Jacqueline
Subject: Re: Conflicting EPA information on VW Passat

Ex. 5, 7

Evan Belser

Chief, Mobile Source Enforcement Branch

US EPA

On Sep 20, 2015, at 12:50 PM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:

Ex. 5, 7

Sent from my iPhone

On Sep 20, 2015, at 12:36 PM, Conger, Nick <Conger.Nick@epa.gov> wrote:

Ex. 5, 7

Sent from my Windows Phone

From: Milbourn, Cathy
Sent: 9/20/2015 12:02 PM
To: Allen, Laura; Hull, George; Valentine, Julia; Conger, Nick
Subject: Re: Conflicting EPA information on VW Passat

Hi Nick,

I should have added you to this email string. I'm presuming you are officially on detail in OPS, yes?

Thanks,

Cathy

Sent from my iPhone

On Sep 20, 2015, at 11:40 AM, "Milbourn, Cathy" <Milbourn.Cathy@epa.gov> wrote:

Inquiry from consumer reports on the VW announcement.

Sent from my iPhone

Begin forwarded message:

From: Jon Linkov <jlinkov@consumer.org>
Date: September 20, 2015 at 7:58:54 AM EDT
To: <birgfeld.erin@epa.gov>, <milbourn.cathy@epa.gov>
Subject: Conflicting EPA information on VW Passat

Good morning -

There is conflicting information about the VW Passat in your recent document releases. You say 2014-15 Passats are included in the violation here (http://www3.epa.gov/otaq/cert/violations.htm), but the vw-nov-caa-09-18-15.pdf says that the 2012-15 Passats are included.

Can you please clarify? Owners are confused and asking us, and we have now published two different dates involved.

Thank you

Jon

--

Jonathan Linkov
Deputy Editor, Autos
Consumer Reports
860.537.0763 x 7315 - CT office
914.378.2741 - NY office
203.241.5003 - mobile
jlinkov@consumer.org

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review, retain, copy, redistribute or use this e-mail or any attachment for any purpose, or disclose all or any part of its contents. If you have received this e-mail in error, please immediately notify the sender by reply e-mail and permanently delete this e-mail and any attachments from your computer system.***

To: Conger, Nick[Conger.Nick@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Millett, John[Millett.John@epa.gov]; Senn, John[Senn.John@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Purchia, Liz[Purchia.Liz@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 1:53:29 PM
Subject: Re: Reuters query

Ex. 5, 7

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 9:47 AM, Conger, Nick <Conger.Nick@epa.gov> wrote:

Ex. 5, 7

From: valerie.volcovici@thomsonreuters.com [mailto:valerie.volcovici@thomsonreuters.com]
Sent: Monday, September 21, 2015 9:28 AM
To: valerie.volcovici@thomsonreuters.com; Conger, Nick
Subject: RE: Reuters query

Hi Nick.

One more question:

Will the EPA review the testing for ALL diesels sold in the US, by any manufacturer?

Thanks,

Valerie

From: Volcovici, Valerie (Reuters News)
Sent: Monday, September 21, 2015 9:25 AM
To: 'Conger.nick@Epa.gov'
Subject: Reuters query

Hi Nick,

I hope you are doing well. I am working on a follow up to Friday's big VW announcement with some colleagues in Detroit.

We'd like to know whether EPA is currently investigating other car companies that sell or have sold diesels in the United States such as GM, FCA, Mercedes and BMW?

We are working on a mid-day deadline. Please let me know if you can talk this AM or if I can speak to Cynthia Giles.

Thanks so much,
Valerie

Valerie Volcovici
Correspondent
Reuters

Phone: +1 (202) 898 8373
Mobile: +1 (718) 496 5224

1333 H Street NW
Suite 500
Washington, DC 20005
Twitter: @ValerieVolco

To: Conger, Nick[Conger.Nick@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Millett, John[Millett.John@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Senn, John[Senn.John@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
From: Purchia, Liz
Sent: Mon 9/21/2015 1:53:41 PM
Subject: RE: Reuters query

Good with me.

From: Conger, Nick
Sent: Monday, September 21, 2015 9:48 AM
To: Birgfeld, Erin; Millett, John; Grundler, Christopher; Senn, John; Belser, Evan
Cc: Purchia, Liz
Subject: FW: Reuters query

Ex. 5

From: valerie.volcovici@thomsonreuters.com [mailto:valerie.volcovici@thomsonreuters.com]
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Correspondent
Reuters

Phone: +1 (202) 898 8373
Mobile: +1 (718) 496 5224

1333 H Street NW
Suite 500
Washington, DC 20005
Twitter: @ValerieVolco

To: Ramsey, Michael[Michael.Ramsey@wsj.com]
From: Grundler, Christopher
Sent: Mon 9/21/2015 1:55:03 PM
Subject: Re: Hi from the WSJ

Hi Mike. The answer is no, it wasn't

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 21, 2015, at 9:25 AM, Ramsey, Michael <Michael.Ramsey@wsj.com> wrote:
>
> Hey Chris - Mike Ramsey here. I haven't been doing the bulk of the VW coverage but I had a question. When I did that analysis a few years ago on how window stickers compare with real world results - diesels were the big outliers, I know you guys knew this and I think you said at the time you were studying that. Was that the genesis of the investigation? If so - I'd like to talk to you about it.
>
> Sent from my iPhone

To: Grundler, Christopher[grundler.christopher@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Millett, John[Millett.John@epa.gov]; Senn, John[Senn.John@epa.gov]; Purchia, Liz[Purchia.Liz@epa.gov]
From: Belser, Evan
Sent: Mon 9/21/2015 1:57:07 PM
Subject: RE: Reuters query

Concur.

From: Grundler, Christopher
Sent: Monday, September 21, 2015 9:53 AM
To: Conger, Nick
Cc: Birgfeld, Erin; Millett, John; Senn, John; Belser, Evan; Purchia, Liz
Subject: Re: Reuters query

Concur

Christopher Grundler, Director

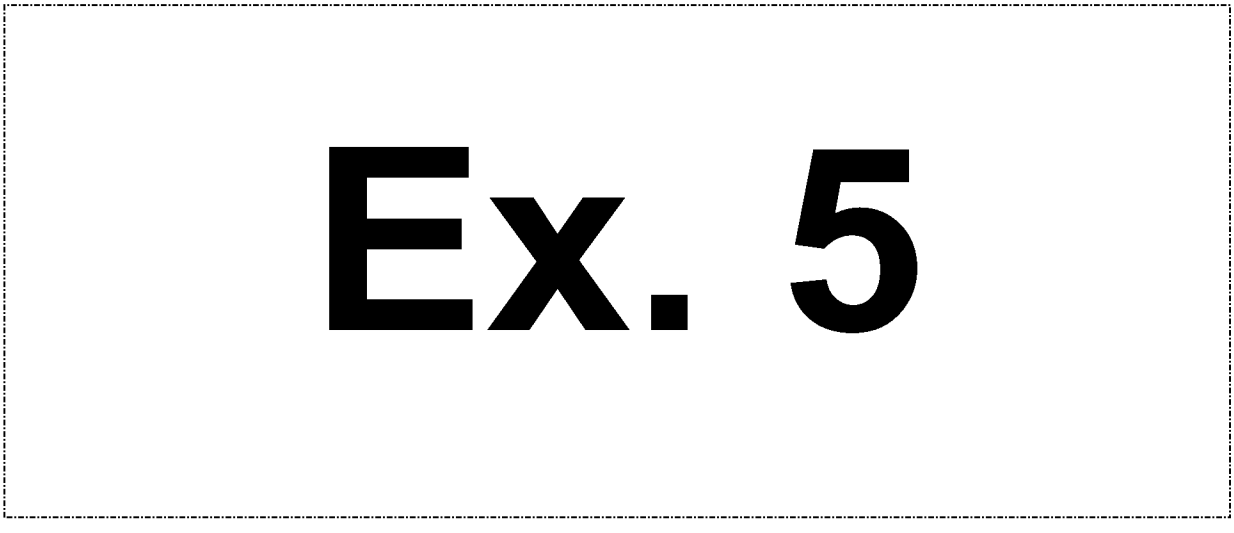
Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 9:47 AM, Conger, Nick <Conger.Nick@epa.gov> wrote:



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Subject: Reuters query

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We are working on a mid-day deadline. Please let me know if you can talk this AM or if I can speak to Cynthia Giles.

Thanks so much,
Valerie

Valerie Volcovici
Correspondent
Reuters

Phone: +1 (202) 898 8373
Mobile: +1 (718) 496 5224

1333 H Street NW
Suite 500
Washington, DC 20005
Twitter: @ValerieVolco

To: Phillips, Anna[Phillips.Anna@epa.gov]
From: .WASH WI-2 Weber, Michael
Sent: Mon 9/21/2015 1:57:15 PM
Subject: time for a call re VW this afternoon
removed.txt

Dear Anna,

Are you available for a quick call this afternoon re VW?

Best,

Michael

Michael Weber

Energy Policy Advisor

Embassy of the Federal Republic of Germany

4645 Reservoir Road NW

Washington, DC 20007

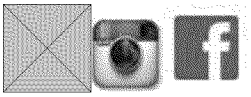
Tel: +1 (202) 298 4381

Fax: +1 (202) 298 4391

E-mail: wi-2@wash.diplo.de

Our Choices Matter - www.transatlantic-climate-bridge.org

www.Germany.info



To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Ramsey, Michael
Sent: Mon 9/21/2015 2:07:36 PM
Subject: RE: Hi from the WSJ

Darnit! Can you tell me what was? I'd love to hear the sleuthing behind it. Or Mike Spector our reg reporter.

-----Original Message-----
From: Grundler, Christopher [mailto:grundler.christopher@epa.gov]
Sent: Monday, September 21, 2015 9:55 AM
To: Ramsey, Michael
Subject: Re: Hi from the WSJ

Hi Mike. The answer is no, it wasn't

Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 21, 2015, at 9:25 AM, Ramsey, Michael <Michael.Ramsey@wsj.com> wrote:
>
> Hey Chris - Mike Ramsey here. I haven't been doing the bulk of the VW coverage but I had a question. When I did that analysis a few years ago on how window stickers compare with real world results - diesels were the big outliers, I know you guys knew this and I think you said at the time you were studying that. Was that the genesis of the investigation? If so - I'd like to talk to you about it.
>
> Sent from my iPhone

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Ex. 4 - CBI
Sent: Mon 9/21/2015 2:12:44 PM
Subject: Re: Beautifully written VW NOV

Good press so far. Public sentiment is that someone should go to jail!

From: "Kaul, Meetu" <Kaul.Meetu@epa.gov>
To: Ex. 6
Sent: Monday, September 21, 2015 10:10 AM
Subject: RE: Beautifully written VW NOV

Thanks Ex. 4 - CBI

Yes, I would definitely like you to be involved. Ex. 4 - CBI
Ex. 4 - CBI Ex. 7

It's a little crazy here today….

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From Ex. 4 - CBI Ex. 6
Sent: Friday, September 18, 2015 5:16 PM
To: Kaul, Meetu
Subject: Beautifully written VW NOV

Congratulations on explaining the complex issue so well and for moving so quickly, and for sharing the dance with CARB. I look forward to working on the case (I hope).

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Cook, Leila[cook.leila@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Bunker, Byron
Sent: Mon 9/21/2015 2:18:04 PM
Subject: FW: Another article about EU diesel emission exceedences

See this article that came out before the announcement.

From: Belser, Evan
Sent: Wednesday, September 16, 2015 11:37 AM
To: Brooks, Phillip; Werner, Jacqueline; Kaul, Meetu; Orehowsky, Gregory; Bunker, Byron; Wehrly, Linc; Shinkman, Susan; Kelley, Rosemarie; Senn, John; Conger, Nick
Subject: Another article about EU diesel emission exceedences

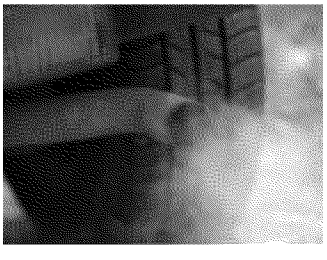
"Udo Rugheimer, a spokesman for Audi, told Bloomberg BNA that "we will always be within the legislation that is valid when we bring a vehicle onto the market.""

Evan Belser

Chief, Mobile Source Enforcement Branch

US EPA

Study: Diesel Cars Exceed EU Nitrogen Oxide Limits



By Stephen Gardner

Sept. 15 — New diesel cars on European Union roads exceed legal limits on nitrogen oxides in exhaust gases by a factor of five on average, according to research published by the advocacy group Transport & Environment (T&E).

Under a 2008 EU regulation on exhaust emissions (Regulation (EC) 692/2008), all new passenger cars registered in the EU after Sept. 1, 2015, are required to comply with limits, known as the Euro 6 standard, on a range of air pollutants. The limit for nitrogen oxide is 80 milligrams per kilometer (mg/km).

T&E clean vehicles manager Greg Archer told Bloomberg BNA Sept. 15 that a range of tests carried out in 2014 and 2015 on new diesel cars had established an average nitrogen oxide emissions level of 400 mg/km, with only three out of 23 tested vehicles complying with the Euro 6 limit.

For one vehicle from German manufacturer Audi, nitrogen oxide emissions were 22 times the legal limit, T&E said.

Nitrogen oxide is an air pollutant that in combination with other gases can produce smog and acid rain and contribute to respiratory disease and other health problems.

Tests Called Ineffective

Archer said the test results on diesel vehicles came from a number of institutes and testing centers, some of which had requested anonymity.

T&E said the EU testing regime for vehicle exhaust emissions was weak and manufacturers were able to comply with pollutant limits in the laboratory while "real-world" emissions were much higher.

The EU had fallen behind the U.S., where diesel vehicles from the same manufacturers "have better exhaust treatment systems and produce lower emissions," because "limits are tighter and tests are more rigorous," the organization said.

Catherine Bearder, a British liberal member of the European Parliament, said the T&E research "shows manufacturers are still dragging their heels when it comes to making the transition to cleaner vehicles."

Diesel vehicles have lower carbon dioxide emissions than gasoline-powered cars, and "once seen as a way to tackle climate change, we now know that the switch to diesel has had a disastrous impact on air quality in our cities," Bearder said.

New Test Planned

The European Commission, the EU's executive, said in a statement to Bloomberg BNA that it was "well aware that under real driving conditions, NOx emissions of diesel vehicles are significantly above regulated emission limits."

The commission plans to replace current laboratory-based tests for car emissions with a real driving emissions (RDE) test, in the wake of previous studies that have shown a wide divergence between laboratory and actual driving emissions .

"Emission limits for the RDE test procedure are being defined. We expect a decision in the coming months," the commission said.

Udo Rugheimer, a spokesman for Audi, told Bloomberg BNA that "we will always be within the legislation that is valid when we bring a vehicle onto the market."

Audi would prefer a common global test for vehicle exhaust emissions so that "every player knows the rules," Rugheimer said.

In June, South Korea announced that new diesel vehicles sold in that country would have to meet on-road emissions standards based on real-world driving conditions beginning in 2017. It said it had found that while laboratory tests closely mirror actual on-the-road emissions from gasoline-powered vehicles, they can significantly understate the real-world emissions from diesel-powered vehicles .

To contact the reporter on this story: Stephen Gardner in Brussels atcorrespondents@bna.com

To contact the editor responsible for this story: Greg Henderson at ghenderson@bna.com

For More Information

The study, "Don't Breathe Here: Tackling Air Pollution From Vehicles," is available athttp://bit.ly/1iqgejM.

To: Senn, John[Senn.John@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Kaul, Meetu
Sent: Mon 9/21/2015 2:37:29 PM
Subject: FW: "Spiegel"-request on Volkswagen-case

Forwarding to you for response since this is from a magazine.

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Christian Wuest [mailto:christian_wuest@spiegel.de]
Sent: Monday, September 21, 2015 7:01 AM
To: Kaul, Meetu
Subject: "Spiegel"-request on Volkswagen-case

Dear Mr Meetu,

we have a short and simple question: are other manufacturers under investigation of EPA or is the Volkswagen-case the only example of its kind that became known to the authorities?
I´d be thankful for a brief and clear response.

Kind regards
Christian Wüst
christian_wuest@spiegel.de

Redakteur
Wissenschaft und Technik

Tel. +49 40 3007 2379

SPIEGEL-Verlag Rudolf Augstein GmbH & Co. KG, Sitz und Registergericht Hamburg HRA 61 755
Komplementärin Rudolf Augstein GmbH, Sitz und Registergericht Hamburg HRB 13 105 Geschäftsführer
Thomas Hass

To: Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Kaul, Meetu
Sent: Mon 9/21/2015 2:45:50 PM
Subject: Questions from public - FW: 2009 Jetta TDI - NOV

I think there is some effort underway to figure out how to address questions from the public such as the one below.

If there is any news/develoment on this, please let me know.

Thanks,

mk

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: **Ex. 6**
Sent: Monday, September 21, 2015 2:54 AM
To: Kaul, Meetu
Subject: 2009 Jetta TDI - NOV

Hello,

I live in Washington state, currently drive a 2009 Jetta TDI and my tabs will expire soon. Due to the defeat device, I won't be able to renew my tabs, and might have to purchase a new car in order to drive to work and school. Is there any action that diesel owners affected by this like myself are able to take? I bought my car used with an expensive warranty at a volkswagan dealership because I care about my own carbon footprint and I hoped to lower emissions (which didn't happen....).
The ideal solution would be a refund from VW for the car and warranty so I can buy something like a volt or prius but I wanted to ask you what would or could happen. I apologize if I'm being confusing in what I'm asking.

Thanks,

Ex. 6

To: Conger, Nick[Conger.Nick@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
From: Belser, Evan
Sent: Mon 9/21/2015 2:52:05 PM
Subject: RE: Reuters query

This one is for OTAQ to answer.

From: Conger, Nick
Sent: Monday, September 21, 2015 10:41 AM
To: Grundler, Christopher; Belser, Evan
Subject: FW: Reuters query

Yay or nay?

From: valerie.volcovici@thomsonreuters.com [mailto:valerie.volcovici@thomsonreuters.com]
Sent: Monday, September 21, 2015 10:40 AM
To: Conger, Nick
Subject: RE: Reuters query

Hi Nick,

Thanks so much.

Does this also include commercial vehicles? Thanks so much!

Valerie

From: Conger, Nick [mailto:Conger.Nick@epa.gov]
Sent: Monday, September 21, 2015 10:03 AM
To: Volcovici, Valerie (Reuters News)
Subject: RE: Reuters query

Hi Valerie. Thanks for reaching out. Cynthia is traveling in Asia this week, so unable to get her on the phone by your deadline. You can, however, attribute the following response to an EPA spokesperson. Thanks!

The California Air Resources Board and EPA have begun procuring in-use diesel vehicles produced by other manufacturers to screen the vehicles for possible defeat devices.

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

Follow us on Twitter @EPAJustice

From: valerie.volcovici@thomsonreuters.com [mailto:valerie.volcovici@thomsonreuters.com]
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Valerie

From: Volcovici, Valerie (Reuters News)
Sent: Monday, September 21, 2015 9:25 AM
To: 'Conger.nick@Epa.gov'
Subject: Reuters query

Hi Nick,

I hope you are doing well. I am working on a follow up to Friday's big VW announcement with some colleagues in Detroit.

We'd like to know whether EPA is currently investigating other car companies that sell or have sold diesels in the United States such as GM, FCA, Mercedes and BMW?

We are working on a mid-day deadline. Please let me know if you can talk this AM or if I can speak to Cynthia Giles.

Thanks so much,
Valerie

Valerie Volcovici
Correspondent
Reuters

Phone: +1 (202) 898 8373
Mobile: +1 (718) 496 5224

1333 H Street NW
Suite 500
Washington, DC 20005
Twitter: @ValerieVolco

To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Ex. 4 - CBI
Sent: Mon 9/21/2015 2:55:05 PM
Subject: RE: TD87 - Volkswagen

I talked to her earlier this morning about the task, she will be on the call.

From: Kaul, Meetu [mailto:Kaul.Meetu@epa.gov]
Sent: Monday, September 21, 2015 10:40 AM
To Ex. 4 - CBI Belser, Evan <Belser.Evan@epa.gov>; Orehowsky, Gregory <Orehowsky.Gregory@epa.gov>
Subject: RE: TD87 - Volkswagen

Brent,

Can Anne Wick join us on this call please?

thanks

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Appointment-----
From: Ex. 4 - CBI
Sent: Friday, September 18, 2015 11:08 AM
To: Ex. 4 - CBI Kaul, Meetu; Belser, Evan
Subject: TD87 - Volkswagen
When: Monday, September 21, 2015 2:00 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Call-In Number: Non-Responsive

Hi Meetu and Evan – I wanted to get something on the calendar to kick this off. If there are urgent needs, feel free to propose a new time or try me directly at my desk. I'm in all day Monday (9/17). I'll be in and out of my office today (9/18). Until we talk, I'll find out what we have on tap here at ERG in terms of for court reporting and German translation.

Call-In Number: Non-Responsive

Participant Code: Non-Responsive

Ex. 4 - CBI

To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Belser, Evan
Sent: Mon 9/21/2015 2:56:46 PM
Subject: RE: Questions from public - FW: 2009 Jetta TDI - NOV

Ex. 5

Evan

From: Kaul, Meetu
Sent: Monday, September 21, 2015 10:46 AM
To: Belser, Evan; Werner, Jacqueline; Bunker, Byron; Conger, Nick; Senn, John
Subject: Questions from public - FW: 2009 Jetta TDI - NOV

Ex. 5

If there is any news/develoment on this, please let me know.

Thanks,

mk

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B

1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Vale Ostrovkin **Ex. 6**
Sent: Monday, September 21, 2015 2:54 AM
To: Kaul, Meetu
Subject: 2009 Jetta TDI - NOV

Hello,

I live in Washington state, currently drive a 2009 Jetta TDI and my tabs will expire soon. Due to the defeat device, I won't be able to renew my tabs, and might have to purchase a new car in order to drive to work and school. Is there any action that diesel owners affected by this like myself are able to take? I bought my car used with an expensive warranty at a volkswagan dealership because I care about my own carbon footprint and I hoped to lower emissions (which didn't happen....).
The ideal solution would be a refund from VW for the car and warranty so I can buy something like a volt or prius but I wanted to ask you what would or could happen. I apologize if I'm being confusing in what I'm asking.

Thanks,
Valensce Ostrovkin

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Mon 9/21/2015 2:58:31 PM
Subject: Volkswagen Drops 17% After Admitting Diesel Emissions Cheat

http://www.msn.com/en-us/money/inside-the-ticker/volkswagen-drops-17percent-after-admitting-diesel-emissions-cheat/ar-AAeySgj?ocid=iehp

-- Shared using Google Toolbar

Ex. 4 - CBI (Contractor)

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory Library

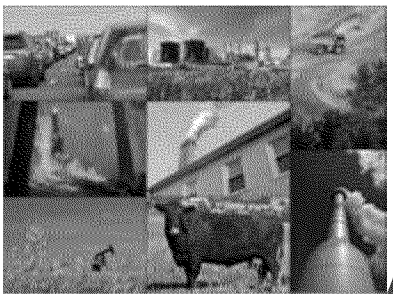
2000 Traverwood Drive

Ann Arbor, MI 48105

Ex. 4 - CBI

To: Allnutt, David[Allnutt.David@epa.gov]; Anderson, Lea[anderson.lea@epa.gov]; Anderson, Steve[Anderson.Steve@epa.gov]; Aranda, Amber[aranda.amber@epa.gov]; Averback, Jonathan[Averback.Jonathan@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Bianco, Karen[Bianco.Karen@epa.gov]; Bogoshian, Matthew[Bogoshian.Matt@epa.gov]; Branning, Amy[Branning.Amy@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Chapman, Apple[Chapman.Apple@epa.gov]; Choi, Jake[Choi.Jake@epa.gov]; Cozad, David[Cozad.David@epa.gov]; Crum, Lynda[Crum.Lynda@epa.gov]; Crystal, Roy[crystal.roy@epa.gov]; Davis, Julian[davis.julian@epa.gov]; Dickinson, David[Dickinson.David@epa.gov]; Dierker, Carl[Dierker.Carl@epa.gov]; Dolph, Becky[Dolph.Becky@epa.gov]; Doster, Brian[Doster.Brian@epa.gov]; Dubey, Susmita[dubey.susmita@epa.gov]; Dubois, Roland[Dubois.Roland@epa.gov]; Frey, Bert[frey.bertram@epa.gov]; Froikin, Sara[Froikin.Sara@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Graham, Cheryl[Graham.Cheryl@epa.gov]; Harrison, Ben[Harrison.Ben@epa.gov]; Hoffman, Howard[hoffman.howard@epa.gov]; Hogan, Stephanie[Hogan.Stephanie@epa.gov]; Holmes, Carol[Holmes.Carol@epa.gov]; Igoe, Sheila[Igoe.Sheila@epa.gov]; Jordan, Scott[Jordan.Scott@epa.gov]; Kaplan, Robert[kaplan.robert@epa.gov]; Kataoka, Mark[Kataoka.Mark@epa.gov]; Klepp, Robert[Klepp.Robert@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Lee, Michael[lee.michaelg@epa.gov]; Lovett, Lauren[Lovett.Lauren@epa.gov]; Mackey, Cyndy[Mackey.Cyndy@epa.gov]; Manners, Mary[manners.mary@epa.gov]; Marks, Matthew[Marks.Matthew@epa.gov]; Matthews, Julie[Matthews.Juliane@epa.gov]; McConkey, Diane[Mcconkey.Diane@epa.gov]; Mclean, Kevin[Mclean.Kevin@epa.gov]; Moore, Bruce[Moore.Bruce@epa.gov]; Morgan, Jeanette[Morgan.Jeanette@epa.gov]; Moyer, Robert[Moyer.Robert@epa.gov]; Muller, Sheldon[Muller.Sheldon@epa.gov]; Niebling, William[Niebling.William@epa.gov]; Nguyen, Quoc[Nguyen.Quoc@epa.gov]; Adair, Jocelyn[Adair.Jocelyn@epa.gov]; Odendahl, Steve[Odendahl.Steve@epa.gov]; Okoye, Winifred[Okoye.Winifred@epa.gov]; Orlin, David[Orlin.David@epa.gov]; Pastorkovich, Anne-Marie[Pastorkovich.Anne-Marie@epa.gov]; Roberts, Martha[Roberts.Martha@epa.gov]; Rodman, Sonja[Rodman.Sonja@epa.gov]; Rowland, John[Rowland.John@epa.gov]; Schaaf, Eric[Schaaf.Eric@epa.gov]; Schmidt, Lorie[Schmidt.Lorie@epa.gov]; Senn, John[Senn.John@epa.gov]; Shenkman, Ethan[Shenkman.Ethan@epa.gov]; Silverman, Steven[silverman.steven@epa.gov]; Smith, Kristi[Smith.Kristi@epa.gov]; Snyder, Doug[Snyder.Doug@epa.gov]; Srinivasan, Gautam[Srinivasan.Gautam@epa.gov]; Stahle, Susan[Stahle.Susan@epa.gov]; Starfield, Lawrence[Starfield.Lawrence@epa.gov]; Stern, Allyn[Stern.Allyn@epa.gov]; Tate, Ragan[Tate.Ragan@epa.gov]; Thrift, Mike[thrift.mike@epa.gov]; Tierney, Jan[tierney.jan@epa.gov]; Ting, Kaytrue[Ting.Kaytrue@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Versace, Paul[Versace.Paul@epa.gov]; Vetter, Rick[Vetter.Rick@epa.gov]; Walker, Mike[Walker.Mike@epa.gov]; Ward, W. Robert[Ward.Robert@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Wilcox, Geoffrey[wilcox.geoffrey@epa.gov]; Williams, Brent[Williams.Brent@epa.gov]; Williams, Melina[Williams.Melina@epa.gov]; Williamson, Timothy[Williamson.Tim@epa.gov]; Zenick, Elliott[Zenick.Elliott@epa.gov]; Wills, Jennifer[Wills.Jennifer@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Blake, Wendy[Blake.Wendy@epa.gov]; Schramm, Daniel[Schramm.Daniel@epa.gov]; Vergeront, Julie[Vergeront.Julie@epa.gov]; Tozzi, Lauren[Tozzi.Lauren@epa.gov]; Coursen, David[Coursen.David@epa.gov]; Pilchen, Zach[Pilchen.Zach@epa.gov]; Skinner-Thompson, Jonathan[Skinner-Thompson.Jonathan@epa.gov]; Vijayan, Abi[Vijayan.Abi@epa.gov]; Roder, Aileen[Roder.Aileen@epa.gov]; Walker, Denise[Walker.Denise@epa.gov]; Caballero, Kathryn[Caballero.Kathryn@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]; Williams, Christopher[Williams.Christopher@epa.gov]; Matthew, Dayna[Matthew.Dayna@epa.gov]; Reid, Lauren[Reid.Lauren@epa.gov]; Sweet, Andrew[Sweet.Andrew@epa.gov]; Hammons, Jeffrey[Hammons.Jeffrey@epa.gov]; Morris, Rachel[Morris.Rachel@epa.gov]; Nguyen, DucH[Nguyen.DucH@epa.gov]; Jordan, Deborah[Jordan.Deborah@epa.gov]; Charlton, Tom[Charlton.Tom@epa.gov]; Kulschinsky, Edward[Kulschinsky.Edward@epa.gov]; Portmess, Jessica[Portmess.Jessica@epa.gov]; kaminer, joan[Kaminer.Joan@epa.gov]
From: Turley, Jennifer
Sent: Mon 9/21/2015 3:06:03 PM

Subject: Air & Radiation Law News for September 21, 2015



Air & Radiation Law News

for September 21, 2015

Bloomberg BNA Daily Environment Report™

Air Pollution

Ozone Advocates Make Final Push at OMB

Several advocacy groups recently met with White House officials to discuss the need to revise national ozone standards, their last chance to influence the Environmental Protection Agency's looming decision....

Air Pollution

Texas Wants Its Civil Penalty Shield Claims Severed

Lawsuits challenging an Environmental Protection Agency requirement that Texas revise a state pollution plan should be separated from other litigation over the presence of civil penalty shields in state implementation plans, Texas and...

Climate Change

Record High Temperatures From El Ninä, Global Warming

The world is only months away from setting its second record for the warmest year in data reaching back to 1880 as a strong El Ninä heats up the Pacific Ocean and climate change pushes temperatures ever higher....

Climate Change

Resilient Transportation Is Good Stewardship: Panel

Planning a surface transportation system that is resilient to extreme weather and a changing climate is simply good stewardship of public resources, panelists said at a conference sponsored by the Transportation Research Board....

Climate Regulation

CEOs Asked to Explain Chamber's Climate Opposition

Chief executive officers from AT&T, Inc., Dow Chemical Co. and more than 100 other companies on the board of the U.S. Chamber of Commerce are being asked to take a stand on the Chamber's efforts to "undermine" federal climate...

Energy

Atlantic Coast Pipeline Files Application With FERC

Atlantic Coast Pipeline LLC, a partnership among four major energy companies, filed an application with the Federal Energy Regulatory Commission for permission to build a 564-mile natural gas pipeline. ...

Enforcement

Volkswagen, Audi Cited for Air Pollution Violations

Volkswagen and Audi sold 482,000 model year 2009 through 2015 four-cylinder diesel cars containing "defeat devices" intended to bypass federal nitrogen oxides emissions testing protocols, the Environmental Protection Agency...

Environmental Reviews

Handbook Offers Way to 'Synchronize' Project Reviews

The Federal Highway Administration has issued an updated version of the "Red Book," a "how-to" manual for synchronizing National Environmental Policy Act and other regulatory reviews for transportation and other infrastructure...

EPA

EPA Awards Grants on Time; Fails Other Measures, GAO Says

The Environmental Protection Agency was successful in awarding grants in a timely manner and for sharing dollars and awards that were won competitively—two achievements that were among the 17 goals it set out for itself in its 2009-2013...

International Climate

EU Ministers Call for Global Greenhouse Gas Peak by 2020

Delegates from around the world meeting at the United Nations climate summit in Paris late this year should agree that global greenhouse gas emissions will peak no later than 2020 and will then decline to half their 1990 level by 2050, environment...

International Climate

Pope's Visit Marked by Optimism on Climate Action

When President Barack Obama, Pope Francis and other world leaders start gathering in New York during the next several days, they may be within reach of a goal that seemed unattainable just a few years ago—an agreement that may actually...

Renewable Energy

Dominion Hosts Event to Cut Wind Turbine Installation Cost

Dominion Resources Inc., owner of Virginia's largest utility, plans to solicit another round of bids for an offshore wind farm after rejecting an earlier proposal that was too expensive. ...

Sustainability

Investors Pay Extra for Environmentally Friendly Bonds

What's in a name? Twenty basis points, apparently....

Trade

ISO Introduces Revised Environmental Standards

The International Organization for Standardization has introduced the third edition of its ISO 14001 certification requirements, widely used by businesses and organizations worldwide to manage their environmental impact. ...

Water Infrastructure

Loans, Green Bonds Can Help Finance Reuse Projects

Money is the primary barrier to the adoption of water-reuse technology, but there's new sources of capital on the horizon, finance and industry experts said at a symposium in Seattle....

Water Pollution

Budget Cuts Could Cost Alabama Water Program Authority

Alabama’s environmental agency will increase permit fees to offset upcoming state reductions to its budget, yet the cuts may cause it to lose federal authority to run its own Clean Water Act permitting program, the state’s environmental...

Latest News

States Say 'E-Enterprise' Could Bolster Rulemaking Relationship With EPA

State officials say the imminent public launch of a website for a joint EPA-state "E-Enterprise" initiative to streamline environmental policy work could bolster states' relationship with the agency on developing regulations and options to reduce compliance burdens, such as electronic reporting and other measures.

EPA Readies Landmark Air Enforcement Fine Against Volkswagen Vehicles

EPA is readying what could be a landmark fine of up to $18 billion against Volkswagen for alleged violations of Clean Air Act standards for 482,000 of the company's diesel cars built for model years (MY) 2009 through 2015, while California's Air Resources Board (CARB) also launches an investigation into the alleged violations.

EPA Vow To Update Grants Tracking Could Address Republican Criticisms

EPA is vowing to modernize its monitoring of grant recipients' compliance with federal mandates in response to a Government Accountability Office (GAO) report that found “long-standing” weakness in tracking the use of grants, and the agency's move could help address some House GOP lawmakers' attacks on EPA's grants management.

Advanced Biofuel Groups Target EPA RFS 'Loophole' And Its GHG Impacts

A coalition of renewable fuel groups is arguing that EPA's proposed decision to scale back renewable fuel blend mandates in its recent renewable fuel standard (RFS) proposal represents a first of a kind decision by the agency to permit an air act “loophole” that undercuts both the RFS law and efforts to limit greenhouse gases.

Proposed Deletion Of 'Ancient Documents' Judiciary Rule Draws Concern

A proposed revision to rules of evidence used in federal courts that would eliminate the "ancient documents" exception against hearsay is drawing concern from some environmental and insurance policyholder attorneys who fear it will make it harder for parties to make insurance claims for environmental contamination or prove other parties' liability in cleanup cost recovery cases.

News Briefs

Obama Says EPA Ozone NAAQS Decision 'Complicated'

President Obama is acknowledging that EPA's looming decision on whether to tighten its ozone national ambient air quality standards (NAAQS) is a “really complicated” situation, saying he recognizes some concerns from states about being placed out of attainment with a stricter limit but also touting the benefits of reducing ozone.

Greenwire

AIR POLLUTION:

Volkswagen accused of using crafty software to dodge rules

Robin Bravender, E&E reporter

Published: Friday, September 18, 2015

This story was updated at 2:15 p.m.

Volkswagen has been manufacturing cars with "sophisticated software" programmed to skirt clean air rules by only turning on full pollution controls when the cars are being tested, government regulators alleged today.

U.S. EPA and California regulators announced that the German automaker is in violation of Clean Air Act rules that prohibit devices used to defeat emissions testing, and vowed to hold the company responsible for its actions.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, who leads EPA's enforcement and compliance office. EPA and California regulators continue to investigate the "very serious" violations, Giles told reporters today. Meanwhile, she said, regulators wanted to inform the public and put the company on notice.

Volkswagen spokeswoman Jeannine Ginivan said in a statement that "VW is cooperating with the investigation," but declined to comment further on the allegations.

According to a violation notice issued by EPA to Volkswagen AG, Audi AG and Volkswagen Group of America Inc., the automaker installed the illegal software on four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015. The allegations cover about 482,000 cars including the models Jetta, Beetle, Audi A3, Golf and Passat.

The software is programmed to detect when the cars are undergoing emissions testing and to turn on full emission controls only during those tests. During normal operations, EPA said, the emission-control devices are less effective and emit nitrogen oxides at up to 40 times the legal standard.

Nitrogen oxides contribute to ozone and fine particulate pollution, and exposure to those pollutants has been linked to a variety of health effects that "can be serious enough to send people to the hospital," EPA air chief Janet McCabe said today.

Volkswagen could be on the hook for stiff penalties.

"The statute provides for civil penalties ... of up to $37,500 per vehicle sold in violation of the Clean Air Act plus additional penalties for other violations and also gives us authority for injunctive relief to remedy violations," Giles said.

With nearly 500,000 cars possibly in violation, that could mean about $18 billion in civil penalties alone.

California's Air Resources Board has also been investigating the automaker's alleged dodging of clean air rules.

"Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," said Air Resources Board Executive Officer Richard Corey.

EPA and the California agency discovered the software after researchers at West Virginia University and the International Council on Clean Transportation raised questions about emissions levels. In response to questions from EPA and CARB, Volkswagen "admitted that the cars contained defeat devices," the agencies said today.

The affected cars are still safe and legal to drive, EPA assured their owners. The agency has the authority to require Volkswagen to issue a recall if EPA determines that a substantial number of cars don't meet clean air rules.

"We will hold VW responsible for recalling the affected vehicles to reduce the emissions problem at no cost to consumers," McCabe said. She noted that there is no recall yet in effect.

Click here for EPA's violation notice.

POLITICS:

Congressman boycotts pope over reports he'll discuss climate

Jean Chemnick, E&E reporter

Published: Friday, September 18, 2015

At least one Catholic Republican will sit out Pope Francis' historic appearance next week before a joint session of Congress because the pontiff's speech might devote some time to his teachings on climate change.

Rep. Paul Gosar (R-Ariz.) said today in an op-ed on the conservative *Town Hall* website that he will "boycott" the pontiff's first-of-its-kind Capitol Hill address Thursday because advance reports say it will emphasize his papal letter on warming rather than Islamic assaults against Christians in the Middle East.

"Media reports indicate His Holiness instead intends to focus the brunt of his speech on climate change -- a climate that has been changing since first created in Genesis," Gosar said in his column. The pope's June encyclical also "adopted all of the socialist talking points, wrapped false science and ideology into 'climate justice' and is being presented to guilt people into leftist policies," Gosar wrote.

The pope's letter to the world's bishops in June emphasized the effect that experts say climate change and environmental degradation could have on the world's poor -- a frequent focus for Francis, who is the first pope from a developing nation.

"If the Pope stuck to standard Christian theology, I would be the first in line," said Gosar, who attended Creighton University, a Jesuit institution, and has referred to his Catholic beliefs when discussing other issues.

Gosar wrote that he wished Francis would talk about the terrorist Islamic State group, which has victimized Christians in regions under its control.

Instead the pontiff seemed to be poised, he said, to tout an encyclical "written with the consultation of that great seminary the EPA and its embattled head Gina McCarthy." He refers to his own bid to impeach McCarthy over inaccurate statements he says she made about the Waters of the U.S. rule during testimony before the House Science, Space and Technology Committee (*E&ENews PM*, Sept. 9).

It is unclear how much time the pope will devote to his climate change encyclical during Thursday's speech. Evan Berry, an associate professor at American University who focuses on philosophy and theology, said Francis might target income inequality and the plight of the poor in his remarks before Congress and save a lengthier review of the climate encyclical for a speech he will make at the United Nations the following day. The encyclical was timed in part to fuel international ambition ahead of this

December's climate summit in Paris, and the last few U.N. leadership meetings -- which take place each September -- have had a climate change focus.

"People who follow the pope's style of engagement are suggesting that he doesn't like to chastise but to take a pastoral approach and ask challenging questions," Berry said.

But the encyclical on climate is likely to be raised during the congressional address, he said, however indirectly. And Berry notes the papal letter carries as much doctrinal weight as any statement or teaching that originates with a pope -- less than canonical law, but as much as teachings on abortion, marriage or other issues that Catholic conservatives have historically embraced.

Furthermore, the pope's itinerary during his time in the United States includes a prison, a food bank and a conference on the sanctity of the family -- a schedule that is likely to include messages to "frustrate both the left and right," Berry said.

While Gosar aims to use the pope's visit to highlight his belief that the science of man-made climate change is not settled, some of his GOP colleagues are doing the opposite. A group of 11 Republican House members released a resolution yesterday that suggests human emissions contribute to climate change, which is a problem that is likely to impact vulnerable communities the most and that must be addressed (*E&E Daily*, Sept. 17).

"All too often, the conversation about appropriate and balanced environmental stewardship gets caught up in partisan politics," said Rep. Chris Gibson (R-N.Y.), who sponsored the measure. He called climate change a "fundamentally conservative issue" and called for "common ground on how to address it."

David Jenkins, president of Republican conservation group Conservatives for Responsible Stewardship, greeted the effort as a "common sense resolution" in line with past Republican actions to protect the environment.

"Just as President Reagan did when addressing ozone depletion, they have risen above politics to acknowledge a serious threat to our planet -- and by doing so, they have increased the likelihood that conservative ideas will finally be brought to bear on a problem that has for far too long been ceded to liberals," Jenkins said in a statement.

But the Competitive Enterprise Institute's Marlo Lewis wrote in a blog post that the moderates' effort was a vague gesture that didn't seem likely to lead to legislation.

"Just how do the co-sponsors propose to do something 'meaningful' about climate change without constraining an economy in which carbon-based fuels supply 82 percent of annual energy consumption?" he queried. He expressed skepticism that Republican House leaders would schedule committee and floor time to move climate legislation, no matter what party proposed it.

AIR POLLUTION:

Half of U.S. counties wouldn't hit tighter ozone standard -- API

Ariel Wittenberg, E&E reporter

Published: Friday, September 18, 2015

Almost half the counties in the United States wouldn't meet tighter ozone standards U.S. EPA has proposed, according to a new analysis from the American Petroleum Institute.

EPA is considering reducing the national ozone standard from 75 parts per billion to between 65 and 70 ppb by 2025. The White House Office of Management and Budget is reviewing the final rule, which is due out by the end of this month.

API analyzed ozone levels in each U.S. county and found 217 counties in the country are in nonattainment under the current 75 ppb standard. That number jumps to 958 counties as the standard drops to 70 ppb and hits 1,433 counties if the standard is set at 68 ppb, according to API. There are 3,007 counties in the United States.

"It is not a linear impact," API Senior Director of Regulatory and Scientific Affairs Howard Feldman said during a conference call this morning. "Its impacts become exponentially greater, with smaller and smaller towns being impacted in many more counties across the nation."

A tighter standard "will impact businesses, impose costs as states will have to develop implementation plans that haven't before," Feldman said. "We are talking about affecting regions that don't have experience with this -- not just the same areas that deal with it now in California, Texas and the Northeast corridor."

Feldman criticized EPA for considering setting levels "at below our peak background levels measured at Yellowstone" National Park.

"We are talking about the type of levels we see at very, very pristine locations in the U.S.," he said. "These are the levels we are talking about at national parks."

Other opponents to tighter ozone standards have underscored the change's potential impact on national parks (*Greenwire*, Aug. 5). Advocacy groups have disputed the claim that air at national parks is pristine, with reports finding air quality in national parks is degraded due to haze, among other things (*Greenwire*, July 28).

API is scheduled to meet next week with officials at OMB to present its analysis to the Obama administration in hopes that EPA will maintain the current ozone standard.

"All they are required to do is review the standard, they are not required to change it," he said.

CLIMATE:

Steyer group launches $2M ad buy ahead of papal visit

Jean Chemnick, E&E reporter

Published: Friday, September 18, 2015

Billionaire activist Tom Steyer's action group will launch a national advertising campaign ahead of Pope Francis' visit next week to the United States highlighting the Catholic leader's message that climate change is a moral issue.

NextGen Climate plans ads beginning this week for media markets in Washington, D.C., and five swing states -- Ohio, New Hampshire, Iowa, Florida and Pennsylvania. The $2 million buy will include spots on national cable television shows.

And NextGen and its partners, which include religious advocacy group NETWORK, a National Catholic

School Social Justice Lobby, will hold events in Columbus, Ohio and Washington to highlight climate and clean energy ahead of the pope's visit.

"Pope Francis' visit to the United States has the power to shift the conversation about climate change in a very real way," Steyer said in a statement. "His may be the most important voice in the world."

Climate change is expected to figure prominently in the pope's visit with President Obama in the White House on Wednesday and in the pope's address to a leadership summit at the United Nations on Friday.

But while he is likely to raise his June encyclical on climate change during his address to a joint session of Congress on Thursday, it is unlikely to be the major theme. Still, at least one Republican Catholic House member has already said he will skip the historic pontifical appearance because it will feature a climate message (*see related story*).

UTILITIES:

Obama admin tells Supreme Court state incentives were unlawful

Jeremy P. Jacobs, E&E reporter

Published: Friday, September 18, 2015

The Obama administration this week said that New Jersey and Maryland programs to incentivize the construction of natural gas generation plants were unlawful and urged the Supreme Court to leave in place rulings that struck them down.

At issue are four appeals filed to the Supreme Court seeking review of two federal appeals courts rulings that threw out similar programs in New Jersey and Maryland.

Both regimes seek to boost electricity generation in their states. In order to encourage construction of new plants, they set up a structure by which the new plant received fixed contract rates and stable revenues from retail electricity purchasers, regardless of whether the plant's power was actually sold through PJM Interconnection, the regional grid operator for the Mid-Atlantic.

The programs were challenged by existing plants that would compete with the new plants in PJM's market.

Both the 3rd U.S. Circuit Court of Appeals in Philadelphia and the 4th U.S. Circuit Court of Appeals in Richmond, Va., struck down the programs. They reasoned that the incentives infringed on the Federal Energy Regulatory Commission's jurisdiction over wholesale rates for electricity and transmission that crosses state lines.

That jurisdiction is provided by the Federal Power Act, and Solicitor General Donald Verrilli argued in a brief filed this week that the Maryland and New Jersey programs are therefore pre-empted.

The Supreme Court in March asked for Verrilli to weigh in on the cases, *Nazarian v. PPL EnergyPlus LLC*, *Fiordaliso v. PPL EnergyPlus LLC*, *CPV Power Development Inc. v. PPL EnergyPlus LLC* and *CPV Maryland LLC v. PPL EnergyPlus LLC* (*Greenwire*, March 23).

Justices return from their summer recess at the end of the month. They will likely consider whether to grant review of the cases in the fall. It takes the votes of four justices to do so.

Click here for the administration's brief.

PEOPLE:

David Letterman's new gig -- climate correspondent

Published: Friday, September 18, 2015

Climate change documentary series "Years of Living Dangerously" has brought David Letterman on board as a correspondent.

The appearance will be Letterman's first since retiring from the "Late Show" in May.

Letterman joins a laundry list of Hollywood stars attached to season two of the Emmy-winning program, including Jack Black, Ty Burrell of "Modern Family" and Cecily Strong of "Saturday Night Live."

"By combining the access and reputation of National Geographic with Hollywood's brightest minds and journalism's heaviest hitters, we plan to create even greater impact with the new season and awaken all of us to the reality of our global situation," Courteney Monroe, chief executive of National Geographic Channels, said in a news release.

Led by executive producers James Cameron, Arnold Schwarzenegger, "60 Minutes" producers David Gelber and Joel Bach, and climate expert Daniel Abbasi, the show has celebrity correspondents investigate the global effects of climate change.

In a statement, Bach said the new season slated for release in October 2016 will focus on "solutions that individuals, communities, companies and even governments can use to address worldwide climate change" (Meredith Blake, *Los Angeles Times*, Sept. 18). **-- DTB**

NUCLEAR WASTE:

Feds lack land, water rights for Yucca -- Nev. governor

Published: Friday, September 18, 2015

Nevada's governor told the Nuclear Regulatory Commission that the federal government lacks the land and water rights to proceed with building the Yucca Mountain nuclear waste repository.

The letter from Gov. Brian Sandoval (R) to the NRC was read at a public hearing yesterday in Amargosa Valley, Nev., about a recently completed environmental impact study of the Yucca Mountain site. The same letter was read at an identical public hearing in Las Vegas on Tuesday (*Greenwire*, Sept. 16).

"Continuation of the NRC Yucca Mountain licensing process actually impedes progress towards finding workable and expedient solutions by diverting our focus," said the letter, which was read again by Robert Halstead, director of Nevada's Nuclear Waste Project Office.

According to the NRC, a draft environmental study showed that contamination levels from the Yucca Mountain project would be low and not dangerous to humans. Nevada residents and politicians have expressed concerns that groundwater from the Yucca area could carry radiation into Amargosa Valley and possibly Native American lands in Death Valley.

The Obama administration dropped all funding for the Yucca Mountain project in 2010, but a federal court ruled in 2013 that the NRC was required to finish its licensing hearings on the repository (*Greenwire*, Aug. 13, 2013).

Halstead has called for a 60-day extension to allow Nevada to do a full review of the environmental report before it's finalized.

"Nevada will also challenge the scope of the draft [environmental impact report] and its failure to consider relevant new information about events and developments since 2008," Halstead said at the meeting (Cy Ryan, *Las Vegas Sun*, Sept. 17). **-- BTP**

NUCLEAR POWER:

Entergy may close troubled Pilgrim plant

Published: Friday, September 18, 2015

The owners of Massachusetts' only nuclear power plant are unsure whether they're willing to invest the millions of dollars required by federal regulators to update the aging plant.

The Pilgrim Nuclear Generating Station's safety rating was downgraded earlier this month by the Nuclear Regulatory Commission, which found "continuing weaknesses in the implementation of Entergy's program for identifying, evaluating and resolving problems at Pilgrim," NRC Region I Administrator Dan Dorman said in a statement at the time (*Greenwire*, Sept. 2).

Owner Entergy Corp. would need to make expensive repairs to raise the 43-year-old plant's safety rating.

"If the corporation finds that the cost of making the improvements of the plant exceed the value of the plant, the corporation may decide to shut the plant down," said David Noyes, Pilgrim's director of regulatory and performance improvement, though he stressed that no decision had been made yet.

Pilgrim has struggled with unexpected shutdowns of its reactor in recent years, and the plant could also be in danger of being shut down by the NRC. Currently, the plant's level of risk is "low to moderate," according to the NRC, and Entergy said before making recent repairs that the odds of a reactor-damaging accident were one in 142,857 years.

The plant lies about 35 miles from Boston and provides 12.5 percent of Massachusetts' electricity. A total of roughly 5 million people live and work within 50 miles of the plant. State officials have declined to talk about how Massachusetts would fill that supply gap if Pilgrim closed.

Gov. Charlie Baker (R) asked Entergy officials in a recent letter to "make certain that the plant meets the highest safety standards."

"We cannot risk the well-being of the residents of the Commonwealth," Baker wrote. Though other prominent officials, including Sen. Ed Markey (D-Mass.), Attorney General Maura Healey (D) and former Gov. Michael Dukakis (D), have called for the plant to close, Baker said he views Pilgrim as part of a "balanced approach" to the commonwealth's energy needs.

In 2012, Entergy was awarded a license to continue operating Pilgrim through 2032, but advocates are ratcheting up pressure on the plant after the latest safety disclosures.

Some have also questioned whether Entergy is financially able to continue safely operating the plant and

store nuclear waste. Entergy will not reveal its costs or revenues from the plant, but it said it has spent about $70 million upgrading it since Japan's 2011 Fukushima Daiichi disaster.

The company's stock price has sunk nearly 30 percent in this year, but William Dean, director of the NRC's Office of Nuclear Reactor Regulation, said this summer that Entergy's "current financial qualifications are adequate to continue safe operation at Pilgrim" (David Abel, *Boston Globe*, Sept. 17). -- **BTP**

EPA:

Grants programs have met just 2 of 17 oversight goals -- GAO

Kevin Bogardus, E&E reporter

Published: Friday, September 18, 2015

Congress' watchdog is pushing U.S. EPA to get a better grasp of its multibillion-dollar grants budget.

In a report released yesterday, the Government Accountability Office found EPA has met few of the goals it set out in the past.

EPA has only fully met two of the 17 performance goals laid out in its 2009-13 grants management plan, according to GAO. In addition, the agency has partially met six of those goals and did not meet one at all. EPA didn't track progress for the remaining eight goals.

EPA's grants programs are massive in scale.

Last year, the agency gave out roughly $4.6 billion in grant money through its headquarters and 10 regional offices. EPA's grants budget exploded in 2009 after the American Recovery and Reinvestment Act passed, more than doubling the grant money available to the agency.

GAO last dug into the agency's grants programs in 2006. Since then, the watchdog found EPA has made progress, with the agency tracking electronically unspent grant funds and keeping up to date on grantee reports.

Nevertheless, there are still problems. For example, eight out of 10 regional offices for the agency still use paper files to document grant programs. In addition, EPA's information technology system is limited, only tracking a small percentage of grants data, making it hard to compare results agencywide.

EPA expects to have a fully updated IT system in place by 2017, but GAO notes that the agency has had similar plans since 2009 and hasn't followed through.

In response to the report, EPA acknowledged that it too often depends on paper files and restricted IT for its grants programs. The agency, however, disputed GAO's conclusions that there are still weaknesses in tracking the grants' results, noting that it has several systems in place to measure those results.

Overall, EPA agreed with the watchdog's recommendations and pledged to update its IT systems across the agency to better manage its grants programs.

Republican lawmakers were quick to pounce on the GAO report, saying the agency needs to better improve management of its grants programs.

"As we look forward into the next year, it is crucial that EPA address these problems and implement the recommendations made by GAO to ensure that recipients of these grants are using the funds appropriately to protect public health and the environment," said Reps. Fred Upton (R-Mich.), chairman of the House Energy and Commerce Committee, and Tim Murphy (R-Pa.), head of the panel's Oversight and Investigations Subcommittee, in a joint statement yesterday.

"Every taxpayer dollar should be spent with care and proper oversight -- EPA must do better."

The two members of Congress called on GAO to conduct the investigation of EPA's grants programs in a September 2014 letter.

GREEN BUILDING:

USDA contest promotes wooden skyscrapers

Published: Friday, September 18, 2015

These days, tall buildings are most closely associated with glass and steel. But the Department of Agriculture is hoping to change that, backing a competition that asks architects to design buildings made out of a surprising material: wood.

The U.S. Tall Wood Building Prize Competition, which is also sponsored by the Softwood Lumber Board and Binational Softwood Lumber Council, asked architects to plan buildings of 10 stories or more made from the material.

The contest has awarded $1.5 million to each of the two winning designs -- a 10-story condo building in New York City and a 12-story office and apartment building in Portland, Ore. -- in the hopes of turning those ideas into a reality.

Secretary of Agriculture Tom Vilsack said using wood in construction has real environmental benefits.

"First and foremost, there is the opportunity to have more energy-efficient construction, because the way this cross-laminated timber is prefabricated, it essentially fits together like pieces of a jigsaw puzzle," he said. "Secondly, the opportunity of building with wood, we obviously will maintain the carbon sequestration benefits of that wood from a climate perspective and we'll reduce that potential risk of fire a bit."

Just 17 wood buildings taller than seven stories have been constructed across the globe in the last five years.

Though opponents of wood buildings worry about fire risks, proponents say the thick panels used in wood buildings are able to resist and contain fire, charring on the outside but maintaining their inner strength.

Vilsack said he ultimately envisions a green building industry that would partner tall wood building construction with U.S. forest restoration, using trees that have been weakened by insects to build buildings instead of leaving them in forests as potential timber for wildfires.

"There's 45 million acres of that diseased wood that's available, and that currently presents a fire risk," he said. "And so, to the extent that we can create this opportunity, it will result, I believe, over time, in more of that diseased wood being removed as opposed to burned" (Chris Mooney, *Washington Post*, Sept. 17). -- **AW**

ELECTRIC VEHICLES:

Tesla markets to moms with new SUV

Published: Friday, September 18, 2015

Tesla Motors Inc.'s high-end electric vehicles have largely been driven by a male market of drivers, but the company has designed its first SUV model in part to appeal to women.

"You name it, I test-drove it, but when I saw the video of Elon Musk revealing the Model X online, I was like, 'OK, this is it,'" said Dallas-area real estate agent Katherine Schwartz, who put a $5,000 deposit on the to-be-released all-electric SUV. The first vehicles are expected to ship later this month.

Tesla has said it plans to sell 500,000 vehicles by 2020, and so it has good reason to expand beyond the predominantly male group of tech-savvy early adopters who have driven its sales so far. Women comprised 13.3 percent of Tesla's flagship Model S purchasers in 2012, according to data from IHS Automotive, but that number had risen to 21.5 percent by last year.

"With the S, we might be something like two-thirds male," Musk said in an interview with Bloomberg earlier this year. "With the X, I think we probably will be slightly majority female."

Women purchase 40 percent of cars in the United States, but they buy 53 percent of small SUVs and 48 percent of small premium SUVs, according to data from J.D. Power and Associates. Many of them look for safe, reliable, fuel-efficient cars with third rows and plenty of cargo space.

"Women dominate the crossover SUV segment," said Jessica Caldwell of Edmunds.com. "Ride height gives a feeling of safety and having a command view of the road is really important to women. Women are also pragmatic buyers, and SUVs bring flexibility. SUVs are growing in popularity, and Tesla brings an electric solution."

Tesla invited a dozen women to its Palo Alto, Calif., headquarters while designing the Model X for a focus group.

The X will have doors that open vertically and a 90 kilowatt-hour battery with a range of roughly 240 miles per charge.

"If you have three kids, you really need a third-row seat," said Ethan Shapiro, who sold his Model S in 2013 to reserve a Model X. "My kids are excited about the falcon wing doors. They've been talking about them for a year" (Dana Hull, Bloomberg, Sept. 18). **– BTP**

TOXICS:

Minorities exposed to more pollution hazards -- study

Published: Friday, September 18, 2015

African-Americans and Hispanics get more exposure to air pollution and toxic waste and suffer from a lack of green space and other health risks, according to a new study.

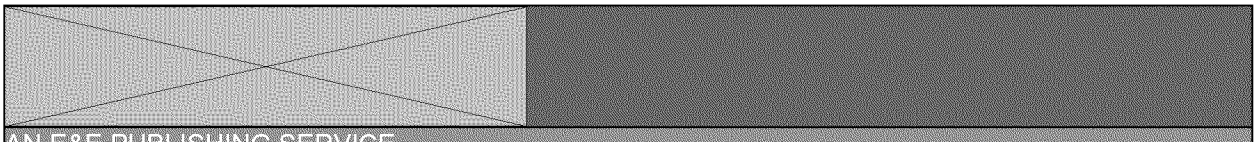
The collaborative study from the University of California, Berkeley, and the California EPA used an online tool to map environmental health risks. It was published in the *American Journal of Public Health*.

"The findings indicate that people of color -- especially African American and Latino Californians -- are much more likely than white Californians to be exposed to both environmental and social stressors that impact health," lead author Lara Cushing, a doctoral student at UC Berkeley, said in a statement. "People can't use this environmental justice screening tool to calculate the probability that they will develop cancer or asthma, but it can and should be used by state regulators and others to focus their efforts to benefit disproportionately impacted communities."

The tool considered 11 risks, from ozone and pesticides to exposure to particle pollution and proximity to toxic waste sites. Combined with socio-economic factors, these risks were turned into a numerical score.

Researchers found that the scores were higher in areas with more African-Americans and Hispanics.

"What's unique about this study is that we are looking at multiple hazards at once and including factors that make populations more vulnerable to the effects of pollution, such as age and disease status," Cushing said. "Still, it is surprising to see such a consistent and stark disparity by race when it comes to the burden of environmental health hazards. It was a bigger factor than income" (Brooks Hays, United Press International, Sept. 17). **-- BTP**



AN E&E PUBLISHING SERVICE

CLIMATEWIRE — Mon., September 21, 2015

READ FULL EDITION

1.BUSINESS:

Ranks of companies setting an internal price on CO2 emissions almost triple in a year

The number of large companies placing an internal price on carbon emissions nearly tripled over the last year, from 150 to 437 firms globally, according to new data released this morning by CDP, the U.K.-based nonprofit that tracks corporate-sector greenhouse gas emissions.

2.AUTOS:

EPA charges that VW installed emissions-control software designed to work only during EPA testing

National and state air regulators, in a notice mailed to Volkswagen AG on Friday, accused the company of installing software in about half a million cars designed to pass federal emissions tests but release higher-than-acceptable levels in everyday driving situations.

TODAY'S STORIES

3.REGULATION:

Does the Clean Power Plan create 'winners' and 'losers' among the states?

4.MARKETS:

World Bank predicts carbon pricing will be the 'backbone' of a global agreement to cut GHG emissions

5.ADAPTATION:

Australia's water architect tests a legal reform to help drought-parched U.S. West

6.FORESTS:

Agriculture giant's deforestation plan draws ire from environmental groups

7.POLICY:

Former oil consultant named environment adviser to British prime minister

8.REGULATION:

Mont. lawmakers express support for Obama carbon plan to governor

9.ADAPTATION:

Miami-Dade funds more sea-level rise adaptation in last-minute budget decision

10.TECHNOLOGY:

British naturalist, others call for crash program to make clean energy cheaper

E&E INTERACTIVE

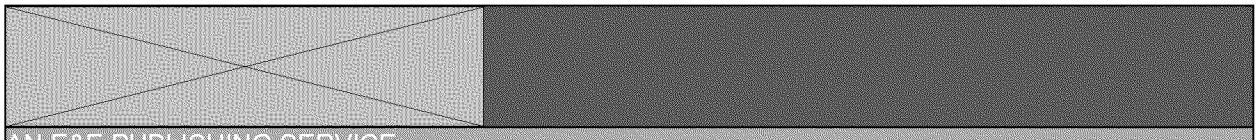
11.CLEAN POWER PLAN:

Pa., Mo. kick off listening sessions, stakeholder meetings

E&ETV'S ONPOINT

12.ENERGY EFFICIENCY:

DOE's Greenwald discusses agency road map to double energy productivity



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ENERGYWIRE — Mon., September 21, 2015

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1.ELECTRICITY:

NRG reaches for reset button -- again -- as it plans 'GreenCo'

The CEO of NRG Energy Inc., David Crane, is embarking on a reboot of his multifaceted power company as it copes with a continuing stock price plunge. The executive used a Friday presentation titled "NRG Reset" to lay out plans to create "GreenCo" for operations tied to areas such as distributed solar for homes and businesses, as well as electric vehicle charging stations.

TOP STORIES

2.ARCTIC:

Hilcorp moves ahead with Beaufort Sea drilling plans

3.CHINA:

President Xi's visit exposes rifts in cybersecurity

4.ELECTRICITY MARKETS:

Provision in Calif. bill a 'big, big deal' for Western power markets

5.TECHNOLOGY:

Self-driving electric cars will need less batteries, more batteries -- report

ELECTRICITY

6.CLEAN POWER PLAN:

Ex-regulator, DOE adviser takes aim at rule's critics

7.COAL:

New settlement reached over Duke-Edwardsport plant costs

OIL AND GAS

8.LAW:

Both sides win procedural victories in Ohio fracking debate

9.OIL:

Persistently low prices rattle resilient Texas economy

10.OIL:

Does the U.S. have a supply glut? Industry and analysts disagree

11.OIL:

China's reserves could keep prices from sinking lower

12.PIPELINES:

Minn. governor defers to regulators on Sandpiper project

13.BUSINESS:

More firms will follow Tulsa producer into bankruptcy -- industry experts

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To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Mon 9/21/2015 3:13:10 PM
Subject: VW accused of using software in 482,000 diesels to skirt US clean-air rules | Autoweek

http://autoweek.com/article/car-news/vw-accused-using-software-482000-diesels-skirt-us-clean-air-rules?utm_source=DailyDrive20150921&utm_medium=enewsletter&utm_term=headline-top&utm_content=body&utm_campaign=awdailydrive

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Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Mon 9/21/2015 3:16:58 PM
Subject: First Shift: VW apology, probe, stop-sale order

http://www.autonews.com/article/20150921/VIDEO/309219901/first-shift-vw-apology-probe-stop-sale-order?cciid=email-autonews-firstshift

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Monday morning stocks have dropped as much as 21% Automotive News says. here.

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National Vehicle and Fuel Emissions Laboratory Library

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Ex. 4 - CBI

Ex. 4 - CBI

To: Conger, Nick[Conger.Nick@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Bunker, Byron
Sent: Mon 9/21/2015 3:29:15 PM
Subject: RE: Reuters query

Ex. 7

****

Byron Bunker

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Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Bunker, Byron
Sent: Monday, September 21, 2015 11:28 AM
To: Conger, Nick; Belser, Evan; Grundler, Christopher
Cc: Birgfeld, Erin
Subject: RE: Reuters query

Ex. 7

****

Byron Bunker

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Mobile: (734) 353-9623

****

From: Conger, Nick
Sent: Monday, September 21, 2015 10:54 AM
To: Belser, Evan; Grundler, Christopher
Cc: Bunker, Byron; Birgfeld, Erin
Subject: RE: Reuters query

Thanks. Adding Byron and Erin in case Chris is tied up.

From: Belser, Evan
Sent: Monday, September 21, 2015 10:52 AM
To: Conger, Nick; Grundler, Christopher

Subject: RE: Reuters query

This one is for OTAQ to answer.

From: Conger, Nick
Sent: Monday, September 21, 2015 10:41 AM
To: Grundler, Christopher; Belser, Evan
Subject: FW: Reuters query

Yay or nay?

From: valerie.volcovici@thomsonreuters.com [mailto:valerie.volcovici@thomsonreuters.com]
Sent: Monday, September 21, 2015 10:40 AM
To: Conger, Nick
Subject: RE: Reuters query

Hi Nick,

Thanks so much.

Does this also include commercial vehicles? Thanks so much!

Valerie

From: Conger, Nick [mailto:Conger.Nick@epa.gov]
Sent: Monday, September 21, 2015 10:03 AM
To: Volcovici, Valerie (Reuters News)
Subject: RE: Reuters query

Hi Valerie. Thanks for reaching out. Cynthia is traveling in Asia this week, so unable to get her on the phone by your deadline. You can, however, attribute the following response to an EPA spokesperson. Thanks!

The California Air Resources Board and EPA have begun procuring in-use diesel vehicles produced by other manufacturers to screen the vehicles for possible defeat devices.

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

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From: valerie.volcovici@thomsonreuters.com [mailto:valerie.volcovici@thomsonreuters.com]
Sent: Monday, September 21, 2015 9:28 AM
To: valerie.volcovici@thomsonreuters.com; Conger, Nick
Subject: RE: Reuters query

Hi Nick.

One more question:

Will the EPA review the testing for ALL diesels sold in the US, by any manufacturer?

Thanks,

Valerie

From: Volcovici, Valerie (Reuters News)
Sent: Monday, September 21, 2015 9:25 AM
To: 'Conger.nick@Epa.gov'
Subject: Reuters query

Hi Nick,

I hope you are doing well. I am working on a follow up to Friday's big VW announcement with some colleagues in Detroit.

We'd like to know whether EPA is currently investigating other car companies that sell or have sold diesels in the United States such as GM, FCA, Mercedes and BMW?

We are working on a mid-day deadline. Please let me know if you can talk this AM or if I can speak to Cynthia Giles.

Thanks so much,
Valerie

Valerie Volcovici
Correspondent
Reuters

Phone: +1 (202) 898 8373
Mobile: +1 (718) 496 5224

1333 H Street NW
Suite 500
Washington, DC 20005
Twitter: @ValerieVolco

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 9/21/2015 3:31:29 PM
Subject: Speaker lineup announced for Automotive News World Congress

Hear from top execs at GM, Ford, Nissan, Audi, NHTSA and more | View this email in a browser

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Required Attendees: Orehowsky, Gregory; Engel, Bethany (ENRD); Van Eaton, Josh (ENRD)
Location: Call Meetu Non-Responsive
Importance: Normal
Subject: VW - next steps
Start Date/Time: Mon 9/21/2015 4:30:00 PM
End Date/Time: Mon 9/21/2015 5:30:00 PM

From: Kaul, Meetu
Required Attendees: Orehowsky, Gregory; Engel, Bethany (ENRD); Van Eaton, Josh (ENRD)
Location: Call Meetu
Importance: Normal
Subject: VW - next steps
Start Date/Time: Mon 9/21/2015 4:30:00 PM
End Date/Time: Mon 9/21/2015 5:30:00 PM

Non-Responsive

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 9/21/2015 3:57:16 PM
Subject: What to do if you own a Volkswagen that was just recalled
MAIL_CONVERSATION_TOPIC: What to do if you own a Volkswagen that was just recalled
Created: Fri 3/18/2016 6:18:23 PM

View article...

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Mon 9/21/2015 4:05:02 PM
Subject: Green Car Report Daily Headlines

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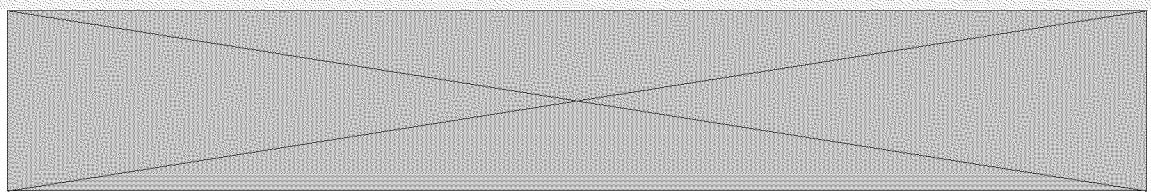

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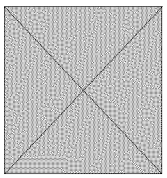

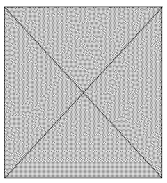

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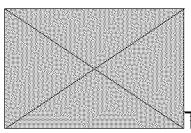
VW TDI Recall, Tesla And Women, LNG For Trucks: Today's Car News

Sep 21, 2015 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today, we have full coverage of the Volkswagen diesel emissions scandal that broke on Friday, the Tesla Model X electric crossover's potential appeal to women, and prospects for more widespread use of liquefied natural gas (LNG) as fuel for long-haul trucks. All this and more on Green Car Reports. The U.S. Environmental Protection Agency accuses...

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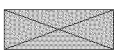
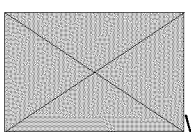


Mazda Predicts Further 30-Percent Efficiency Gain For Next SkyActiv Engines

Sep 21, 2015 03:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

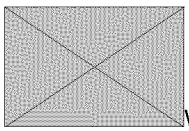
 While other manufacturers have turned to turbocharging and hybrids to boost fuel economy, Mazda has tried to squeeze the most it can out of unassisted internal-combustion engines. The company's SkyActiv line

of efficiency-focused engines rely solely on tuning and some technical tricks to maximize gas mileage. SkyActiv engines have largely lived up...

comments | read more

Truckers Slowly Warm To Cold Liquified Natural Gas

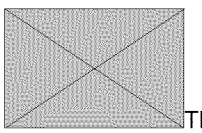
Sep 21, 2015 02:00 pm | feedback@highgearmedia.com (Stephen Edelstein)

 When it comes to lower-emission alternatives to diesel in long-haul trucks, natural gas has some positives. In addition to being cleaner burning, the fuel is in abundant supply, and doesn't come with any severe range or performance shortfalls. But the extra cost of natural-gas powered vehicles has largely kept fleet operators away. DON'T MISS...

comments | read more

VW Diesel Emissions Recall: What You Need To Know In 10 Questions

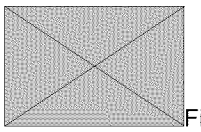
Sep 21, 2015 01:00 pm | feedback@highgearmedia.com (John Voelcker)

 The news that Volkswagen had deliberately circumvented U.S. EPA emissions laws on its so-called "clean diesel" models from 2009 to 2015 hit the automotive world like a bombshell on Friday. Over the weekend, more news emerged, with a statement and apology from VW Group CEO Martin Winterkorn. The company also took all remaining new 2.0-liter TDI...

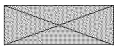
comments | read more

Tesla Model X: The Electric SUV Women Say They Want

Sep 21, 2015 11:00 am | feedback@highgearmedia.com (Stephen Edelstein)

 First deliveries of the Tesla Model X electric crossover are expected to take place just over a week from now. With production set to ramp up gradually after that, speculation will likely shift to whether the Model X will be as much of a success as the Model S. And it's possible that women could be the deciding factor. DON'T MISS: Will Tesla Model...

comments | read more



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Menlo Park, CA 94025

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Update your profile

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 4:18:31 PM
Subject: Volkswagen Denied Deception to E.P.A. for Nearly a Year - NYTimes.com

http://mobile.nytimes.com/2015/09/22/business/international/volkswagen-shares-recall.html?_r=1&referrer=

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Shepardson, David[DShepardson@detroitnews.com]
From: Grundler, Christopher
Sent: Mon 9/21/2015 4:20:07 PM
Subject: Re: here you go

The chronology in the notices makes clear that we were unwilling to certify the MY2016 diesel products

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 12:05 PM, Shepardson, David <DShepardson@detroitnews.com> wrote:

> The admission came only after the E.P.A. threatened to withhold approval for Volkswagen's new 2016 models, according to letters sent to company officials by the E.P.A. and California regulators.
>
> (It's not clear if that refers to all, and implies that threatened: EPA didn't do it) Maybe it is a misread on my part.) Just let me know what you think
>
> http://www.nytimes.com/2015/09/22/business/international/volkswagen-shares-recall.html?_r=0
>
> Volkswage
> The New Y
> The compa
>
> Read more...
>
> David Shepardson

Detroit News Washington Bureau Chief
529 14th Street NW Suite 969
Washington, DC 20045
(202) 662-8735 (phone)
(202) 365-8210 (mobile)
twitter.com/davidshepardson

To: Ex. 7

Ex. 7

From: Wehrly, Linc
Sent: Mon 9/21/2015 4:22:33 PM
Subject: NNTO: VW 16MY Certificate call-in number: 866-299-3188; Non-Responsive

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Shepardson, David
Sent: Mon 9/21/2015 4:26:06 PM
Subject: Re: here you go

Thanks

But you still haven't right?

Just to be clear -- we are only talking about the 16 models under investigation. Not the other diesels in larger vehicles

David Shepardson
Detroit News Washington Bureau Chief
529 14th Street NW Suite 969
Washington, DC 20045
(202) 662-8735 (phone)
(202) 365-8210 (mobile)
twitter.com/davidshepardson

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Sent: Monday, September 21, 2015 12:20 PM
To: Shepardson, David
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http://www.nytimes.com/2015/09/22/business/international/volkswagen-shares-recall.html?_r=0

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Detroit News Washington Bureau Chief
529 14th Street NW Suite 969
Washington, DC 20045
(202) 662-8735 (phone)
(202) 365-8210 (mobile)
twitter.com/davidshepardson

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Aaron Kessler
Sent: Mon 9/21/2015 4:33:31 PM
Subject: Re: Thanks for yesterday; but oh hell, re: headline

Chris,

So as you might expect, we're writing yet another story on VW today. But one thing they'd like to do is find a way to explain exactly how this device works.
The NYT graphics team is aiming to put together some visuals - do you happen to know if there's a colleague on your end who can walk them through the technical aspects? Where in the car the device is located, is it a mix of software and hardware (or just software), how it functions, etc.

If you know this stuff yourself of course, that would be great - though if you're busy and there's a technical colleague lower down the chain that has time to get on the phone with our graphics person, that would be perfect.

Aaron

On Sun, Sep 20, 2015 at 5:25 PM, Aaron Kessler <akesslernyt@gmail.com> wrote:

> Thanks, and believe me I know how it can be when you see something that may be inside baseball to you, but still meaningful, described incorrectly out there in the world. So no worries about fixing it, was happy to do so.
>
> **Ex. 6**
>
> Aaron
>
> On Sat, Sep 19, 2015 at 8:44 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> > Aaron:
> > I really appreciate your note, and the effort. It means a lot. I apologize if I came across to you and Coral as rather impertinent--it was a stressful week.
> >
> > Despite the headline, I think the story was very well done, and the ICCT quote added an important dimension. And of course, I loved the placement of the story on page one above the fold !
> >
> > I'm sorry I did not reply sooner. It's Game Day in Ann Arbor and Ex. 6 and I were at the game and tailgating after. Enjoy the eastern shore --when Ex. 6 and I lived in the DC area we loved exploring the Chesapeake.
> >
> > Chris

Christopher Grundler, Director
Office of Transportation and Air Quality
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>
> I'm actually with my wife down on the Chesapeake Bay this weekend, and so just noticed that after Coral and I made extra sure in our phrasing, and so we thought communicated that up the chain, looks like someone on the copy desk when they wrote the final headline last night used "orders" again. At least when I looked at the online version now, it's got that word in there. Grr.
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> Anyway, I didn't want you to wake up this morning and think, wth? Given our conversation. When stories get chosen for the front page they go through more hands, and somehow later on it got added -- but I'm going to send a note right now to see if they can tweak the headline online to at least say "to order" or something that gets the timing accurate.
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From: Bunker, Byron
Required Attendees: Cohen, Janet; Wehrly, Linc; Ex. 7 @ARB; Ex. 7 Ex. 7 @ARB
Location: Non-Responsive
Importance: Normal
Subject: CARB VW next steps
Start Date/Time: Mon 9/21/2015 5:00:00 PM
End Date/Time: Mon 9/21/2015 6:00:00 PM

From: Bunker, Byron
Required Attendees: Cohen, Janet; Wehrly, Linc; Ex. 7
Ex. 7
Location: N12, conf call 866 299-3188 code Non-Responsive
Importance: Normal
Subject: CARB VW next steps
Start Date/Time: Mon 9/21/2015 5:00:00 PM
End Date/Time: Mon 9/21/2015 6:00:00 PM

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 5:08:58 PM
Subject: New NYT Request

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)
Begin forwarded message:

From: Aaron Kessler <akesslernyt@gmail.com>
Date: September 21, 2015 at 12:33:31 PM EDT
To: "Grundler, Christopher" <grundler.christopher@epa.gov>
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Ex. 6

Chris

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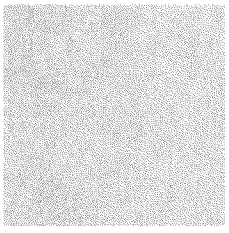
>
> Aaron

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Mon 9/21/2015 5:15:30 PM
Subject: Clarify Emissions Allegations, German Economy Minister Tells VW
clarify-emissions-allegations-german-econo.pdf



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Ex. 4 - CBI (Contractor)

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory Library

2000 Traverwood Drive

Ann Arbor, MI 48105

Ex. 4 - CBI

http://www.epa.gov/otaq

Ex. 4 - CBI

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: E&E Publishing
Sent: Mon 9/21/2015 5:18:56 PM
Subject: September 21 -- Greenwire is ready

Read today's Greenwire on the web

AN E&E PUBLISHING SERVICE

GREENWIRE — Mon., September 21, 2015

READ FULL EDITION

1.ENERGY POLICY:

Industry execs pressed Okla. governor on message -- emails

Two well-known energy executives pressed Oklahoma Gov. Mary Fallin (R) to pay more attention to coal and oil in her public remarks, according to emails obtained by *Greenwire*.

TOP STORIES

2.ENDANGERED SPECIES:

Listing decision for sage grouse coming tomorrow

3.NEWSMAKER:

Cowboy is likely pick to lead BLM's embattled Nev. office

4.FEDERAL AGENCIES:

IGs burdened by budget, bureaucracy -- survey

POLITICS

5.TRANSPORTATION:

Treasury chief's daughter picked for DOT's top financial post

6.LOBBYING:

Ex-GOP congressman representing environmental group

7.CAMPAIGN 2015:

Rivals in La. gubernatorial race release new ads

8.MINING:

Execs seek blessing from Vatican

CONGRESS

9.NATIONAL PARKS:

N.Y. Dems call for first LGBT national monument

10.CAMPAIGN 2016:

Democrat announces bid for N.C. Senate seat

NATURAL RESOURCES

11.CHESAPEAKE BAY:

NOAA study aims to ensure survival of prehistoric behemoth

12.WILDFIRES:

Intense blazes could permanently reshape Western forests

13.NATIONAL FORESTS:

Hiker stumbles on body in Angeles

LAW

14.PEOPLE:

Bracewell & Giuliani beefs up enviro law practice

15.WETLANDS:

Wyo. man, EPA at odds over pond

16.OIL AND GAS:

Railroad refuses to pay in Quebec derailment settlement

17.NORTH DAKOTA:

Woman charged in alleged plot to take uncle's oil rights

DROUGHT

18. CALIFORNIA:
Some senior water rights holders get OK to resume pumping

19. DRINKING WATER:
Las Vegas reserves could support 1M more residents

ENERGY

20. COAL:
Murray sues union for 'flagrant breach' of wage agreement

21. OBITUARY:
Oilman remembered for handshake deals, honesty

FEDERAL AGENCIES

22. OBITUARY:
White House staffer dies during charity bike race

TRANSPORTATION

23. AIR POLLUTION:
Volkswagen apologizes, halts sales of some diesel models

24. RAIL:
Feds probe S.D. ethanol derailment

PUBLIC HEALTH

25. ENERGY EFFICIENCY:
Updated homes increase risk of asthma

26. TOXICS:
Action on paint stripper elusive despite decades of warnings

INTERNATIONAL

27. COSTA RICA:
Tourists disrupt turtle nesting after El Niño opens access

E&E INTERACTIVE

28. CLEAN POWER PLAN:
Pa., Mo. kick off listening sessions, stakeholder meetings

E&ETV'S ONPOINT

29. ENERGY EFFICIENCY:
DOE's Greenwald discusses path to double energy productivity

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Susan Beck
Sent: Mon 9/21/2015 5:19:29 PM
Subject: American Lawyer/ Volkswagen article

Ms. Kaul,

I'm a reporter with The American Lawyer publication, and I'm working on an article about the EPA's action against Volkswagen.

In particular, I'm trying to identify the lawyers who have been representing Volkswagen and the roles they have played.

Stuart Drake from Kirkland & Ellis is copied on the EPA violation letter. Has he been representing Volkswagen during the entire investigation? Have any other lawyers or law firms been involved?

We could talk on background if you prefer.

My deadline is 5 pm ET today.

Thanks,

Susan

Susan Beck

Senior Writer

The American Lawyer

216-925-3113

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: E&E Publishing
Sent: Mon 9/21/2015 5:20:55 PM
Subject: September 21 -- Greenwire is ready

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FEDERAL AGENCIES

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To send a press release, fax 202-737-5299 or email editorial@eenews.net.

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To: Grundler, Christopher[grundler.christopher@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
Cc: Cohen, Janet[cohen.janet@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Olechiw, Michael[olechiw.michael@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Charmley, William[charmley.william@epa.gov]; Moran, Robin[moran.robin@epa.gov]; Manners, Mary[manners.mary@epa.gov]; Alson, Jeff[alson.jeff@epa.gov]
From: Birgfeld, Erin
Sent: Mon 9/21/2015 5:25:59 PM
Subject: FW: Volkswagen Clips 9/21/2015

FYI – the latest clips

From: Gong, Kristiene
Sent: Monday, September 21, 2015 11:56 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

NY Times:

http://www.nytimes.com/2015/09/22/business/international/volkswagen-shares-recall.html

Volkswagen Denied Deception to E.P.A. for Nearly a Year

By JACK EWING SEPT. 21, 2015

FRANKFURT — For nearly a year, Volkswagen officials told the Environmental Protection Agency that discrepancies between the formal air-quality tests on its diesel cars and the much higher pollution levels out on the road were the result of technical errors, not a deliberate attempt to deceive Washington officials.

But early this month, Volkswagen executives finally made a startling admission: The diesels it sold in the United States had software deliberately designed to cheat on the tests.

The company was evidently concerned that actually meeting the federal emissions standards would degrade the power of the engines, which it marketed as comparable in performance to gasoline engines. Meeting the standard would also undercut the fuel efficiency that is one of the main selling points of diesels.

The admission came only after the E.P.A. threatened to withhold approval for Volkswagen's new 2016 models, according to letters sent to company officials by the E.P.A. and California regulators.

Since news of that mass deception broke on Friday, Volkswagen has scrambled to conduct damage control, with its chief executive issuing an apology and the company saying it would not sell its 2015 and 2016 diesel cars in the United States.

But that did not stop Volkswagen shares from plummeting when trading opened in Europe on Monday. And the apology has not relieved pressure on Martin Winterkorn, the Volkswagen chief executive, whom analysts said would have tough questions to answer, seeking to know when he and other top executives at the company, which is ruled from the top with Germanic precision, were aware of the diesel deception.

Adding to pressure on Volkswagen, the German government said on Monday that it would also begin an inquiry to make sure that Volkswagen and other carmakers are complying with laws on auto emissions.

The E.P.A. disclosed the yearlong series of letters with Volkswagen as part of accusations it made against the company on Friday. The agency will require the company to recall nearly half-a-million vehicles equipped with 2-liter diesel engines dating to the 2009 model year. Volkswagen also faces fines that could run into the billions of dollars.

Volkswagen shares plunged about 20 percent on Monday, as investors registered alarm at the damage the company could suffer.

Mr. Winterkorn issued an apology on Sunday, saying the company had "broken the trust of our

customers and the public."

But the sophistication of the software used to manipulate emissions tests in the United States, and extensive attempts by Volkswagen to deflect official scrutiny before admitting misconduct this month, are sure to raise questions about Mr. Winterkorn's effectiveness only months after he survived an internal power struggle.

"Either he knew, or he didn't know, which is even worse," said Ferdinand Dudenhöffer, a professor at the University of Duisburg-Essen who is a longtime Volkswagen critic. "Any politician in his situation would have to resign."

Volkswagen's supervisory board, which Mr. Winterkorn reports to, will hold a regularly scheduled meeting on Friday, and it is certain to discuss the E.P.A. action.

After being confronted last year with evidence that some diesel models did not comply with pollution standards under certain conditions, Volkswagen executives originally offered technical explanations, according to a letter of complaint sent to the company by the E.P.A. and the California Air Resources Board.

It was only on Sept. 3, according to the letters, that executives at Volkswagen of America, the company's United States unit, admitted that cars equipped with the 2-liter diesel motors contained the software.

The software measured factors such as the position of the steering wheel, the vehicle's speed and even barometric pressure to sense when the car was being subjected to testing, the E.P.A. said. The car then configured itself to reduce emissions of nitrogen oxide, a gas that is a major contributor to smog and is linked to an array of respiratory ailments including asthma, emphysema and bronchitis, the E.P.A. said on Friday.

Volkswagen is known for being a tightly controlled, autocratic organization, raising questions about how such a sophisticated system could have been installed in nearly half a million vehicles without knowledge of top management.

The plunge in Volkswagen shares was a clear indication that investors believe that company profit and sales could suffer because of the E.P.A. accusations. However, Volkswagen is relatively immune to stock market pressure because only 12 percent of its voting shares are traded. Porsche Automobil Holding, controlled by members of the Porsche family, holds a slight majority. The state of Lower Saxony owns 20 percent and the sovereign wealth fund of Qatar owns 17 percent.

Stephan Weil, the prime minister of Lower Saxony, where Volkswagen has its headquarters and major manufacturing operations, said in a statement on Monday, "Manipulation of an emissions test is completely unacceptable and without any justification."

But Mr. Weil said consequences could be discussed only after a thorough investigation of the circumstances.

In Berlin, the government of Chancellor Angela Merkel said it would ask carmakers for information as the first step in an inquiry.

"We expect reliable information from carmakers so that the Federal Office for Vehicles can check whether similar manipulation in the exhaust systems has taken place in Germany or Europe," Andreas Kübler, a spokesman for the Environment Ministry, told reporters in Berlin.

The European Commission has contacted Volkswagen as well as the E.P.A. for details about the accusations, a commission spokeswoman said.

"It is premature to comment on whether any specific immediate surveillance measures are also necessary in Europe and whether vehicles sold by Volkswagen in Europe are also affected," the spokeswoman said in an email. "We are taking the matter very seriously."

South Korea also planned to test Volkswagen cars to make sure they were in compliance with

pollution rules, according to news reports.

More than half of all vehicles sold in Europe are diesels, which are popular because they typically offer better fuel economy than gasoline. European Union pollution rules were more favorable to diesels than United States rules, but they have been progressively tightened. The most recent standard, known as Euro 6, took effect for all new cars sold on Sept. 1.

Technology exists to reduce the amount of nitrogen oxides emitted by diesels. But the technology also tends to reduce fuel economy as well as performance. The software installed by Volkswagen on vehicles sold in the United States avoided this trade-off, which could have come as a disappointment to American customers, by scaling back pollution controls when the car was not being tested.

The accusations by the E.P.A. are a blow to Volkswagen's efforts to build up its meager market share in the United States, in part by promoting "clean diesel" technology.

The silver lining for Volkswagen, though, may be that its most profitable vehicles in the United States are Porsche and Audi cars not affected by the E.P.A. action. The cars affected are Volkswagen Golf, Jetta, Beetle and Passat models from 2009 through 2015 that are equipped with 2-liter diesel engines.

Another silver lining for Volkswagen may be that diesel powered cars account for only a tiny fraction of sales in China, which is the company's largest market.

Among Audi models, only the compact A3 is affected in the United States. The A3 accounted for less than a fifth of the 111,000 vehicles that Audi sold in the United States from January through August, and only a fraction of those A3s would have been equipped with diesels.

The E.P.A. said on Friday that Volkswagen would be required to recall the affected vehicles for repairs to make them compliant with smog regulations. Car owners would not have to pay for the repairs. Many owners may not bother, though, because the changes are likely to reduce fuel consumption and performance.

John Schilling, a Volkswagen spokesman, said on Sunday that the company would stop selling 2015 and 2016 Volkswagen and Audi models equipped with the 2-liter diesel engines, which the company had marketed as "clean diesel." The company will also stop selling used cars that have the engines, Mr. Schilling said.

He said he did not know how many models would be stuck on dealer lots as a result of the decision. This month, Volkswagen had said that 23 percent of new cars sold in August in the United States were diesels, or 7,400 vehicles. Some diesels, such as those used in Volkswagen S.U.V.s, are not affected by the E.P.A. action.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:54 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

AP (via US News & World Report)

http://www.usnews.com/news/business/articles/2015/09/21/vw-stock-crashes-after-admitting-it-rigged-us-emission-tests

Faulty Tests Cost VW Billions

By FRANK JORDANS and PAN PYLAS, Associated Press

BERLIN (AP) — Around 15 billion euros ($16.9 billion) was wiped off the market value of Volkswagen AG on Monday following revelations that the German carmaker rigged U.S. emissions tests for about 500,000 diesel cars.

By midday trading in Frankfurt, Volkswagen's share price was 19.3 percent lower at a three-year

low of 130.20 euros. Its dramatic fall weighed heavily on Germany's main stock index, the DAX, which underperformed its peers in Europe with a 0.6 percent decline.

Volkswagen's market woes Monday follow a weekend that saw the company's reputation for probity seriously damaged by revelations from the Environmental Protection Agency in the U.S. that it had skirted clean air rules. All told, the EPA indicated that VW faces fines that could run up to more than $18 billion.

The EPA said VW used a device programmed to detect when the cars are undergoing official emissions testing. The software device then turns off the emissions controls during normal driving situations, allowing the cars to emit more than the legal limit of pollutants.

Volkswagen marketed the diesel-powered cars, which account for about 25 percent of sales, as being better for the environment. The cars, built in the last seven years, include the Audi A3, VW Jetta, Beetle, Golf and Passat models.

"The company will have to recall nearly 500,000 affected cars, which will cost it millions of dollars, and that's even before the damage to its brand and potential fines," said Michael Hewson, chief market analyst at CMC Markets.

The agency has ordered VW to fix the cars at its own expense but said car owners do not need to take any immediate action. The EPA insisted that the violations do not pose any safety hazard and said the cars remain legal to drive and sell while Volkswagen comes up with a plan to recall and repair them. However, it said the cars posed a threat to public health.

The EPA also indicated the scale of the fines that could be imposed on VW. It said the carmaker could be hit up to $37,500 per vehicle for the violations — a total of more than $18 billion. The California Air Resources Board is also investigating.

Volkswagen has had a difficult year, its share price having fallen from over 250 euros amid signs of faltering sales in the U.S. and China.

VW edged out Toyota to become the world's top-selling automaker the first half of 2015. But a hit to its reputation from the emissions revelations could hamper its efforts at a sales rebound in the U.S.

If other regulatory authorities decide VW has a case to answer, then the carmaker faces the potential for even bigger fines.

"The news so far revolves around the U.S. impact, but if European investigators become interested the potential penalties could multiply very quickly," said Chris Beauchamp, senior market analyst at IG.

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Washington Examiner:

http://www.washingtonexaminer.com/volkswagen-sorry-promises-probe-on-epa-violations/article/2572497

Volkswagen 'sorry,' promises probe on EPA violations

By DANIEL CHAITIN (@DANIELCHAITIN7) • 9/20/15 3:23 PM

Volkswagen apologized Sunday following allegations by the Environmental Protection Agency and the state of California that hundreds of thousands of diesel cars made by the German automaker are breaking emissions laws in the United States.

"The Board of Management at Volkswagen AG takes these findings very seriously," wrote Martin Winterkorn, CEO of Volkswagen. "I personally am deeply sorry that we have broken the trust of our customers and the public. We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case. Volkswagen has ordered an external investigation of this matter."

On Friday, the EPA and California charged Volkswagen with willfully installing software in its 4-cylinder diesel cars that would allow cars to bypass emission standards. The cars cited for violations include signature Volkswagen cars manufactured between 2009 and 2015, including the Jetta, Passat, Beetle and Golf, as well as the A3 from Audi, Volkswagen's luxury line.

All together, about 482,000 diesel passenger cars sold in the United States since 2008 are included in the allegations.

The statement promises that Volkswagen will "re-establish trust" it may have lost and that the company will reverse any damage done.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," Winterkorn added.

The EPA issued a notice of violation to Volkswagen, while the state of California sent an In-Use Compliance letter. Both the EPA and the California Air Resources Board are conducting separate investigations into the alleged misbehavior.

Recalls are likely, and the combined fines could add up to $18 billion if the result of the investigations support the allegations.

The EPA alleges that the Volkswagen cars are fitted with software to trick emission testers, but that under normal operation emit nitrogen oxides at up to 40 times the standard. Under the Clean Air Act, such an instrument is classified as a "defeat device."

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for the Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

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The Epoch Times:

http://www.theepochtimes.com/n3/1755607-volkswagen-circumvents-epa-rule-its-not-the-first-time/

Volkswagen Skirts EPA Rules; It's Not the First Time

By Arleen Richards

Volkswagen Group of America admitted to sidestepping clean air standards after the EPA and California's clean air watchdog confronted the German automaker with evidence of high in-use emissions from light-duty diesels.

On Friday, Sept. 18, the EPA slapped VW with a notice of violation for using sophisticated software to circumvent national emissions standards. The software, which the EPA calls a "defeat device," is designed to implement full emissions control systems when the car is undergoing state emissions testing. During normal driving, the emissions control is turned off, permitting the significantly harmful diesel fumes to be expelled—40 times more than allowed under the Clean Air Act. VW and the California Air Resources Board (CARB) have both initiated investigations.

Volkswagen CEO Dr. Martin Winterkorn, on Sunday, apologized for breaking the public's trust and vowed to cooperate fully with agency investigations.

He ordered an internal investigation, saying in a statement, "We do not and will not tolerate violations of any kind of our internal rules or of the law."

But this episode is not the first time the EPA or CARB has had run-ins with VW. In the past, both agencies charged VW with similar violations, which resulted in penalties.

Defective Oxygen Sensors

VW previously failed to report its discovery of emission defects in at least 329,000 of its 1999, 2000, and 2001 Golf, Jetta, and New Beetle vehicles.

In May 2001, after conducting a random test, the EPA identified a problem with tailpipe emissions in the 1999 model vehicles caused by a failed oxygen sensor. It turns out, VW knew about the problem for a year already—since it had received numerous warranty claims associated with cracked oxygen sensors—but failed to report it. According to the Clean Air Act, any emission-related defect found in 25 vehicles or engines of the same model year has to be reported within 15 days.

VW spent $26 million in January 2002 to recall all the vehicles and replace or repair the part. Another estimated $660,000 was spent on an enhanced defect tracking system.

The EPA finally settled its case with VW in 2005, penalizing the delinquent car maker $1.1 million.

The state of California has been working closely with the EPA in testing VW cars and issued a separate notice of violation to VW in the current case.

California has been a leader in clean energy investments and set the stage in 2006 for transitioning to a sustainable, low-carbon future with the passage of AB 32, a law requiring sharp reduction in greenhouse gases. Since then, several legislative initiatives have been implemented to build the next generation of clean, fuel-efficient cars.

The CARB implements the state's vehicle regulations through a vigorous certification process, as well as compliance and enforcement programs. It regularly tests vehicles to ensure compliance with air quality standards.

In 2004, VW settled a case with CARB for $552,500 for selling cars in California that had not been properly certified. VW admitted to selling 84 new 2002 vehicles from several retail locations throughout the state, attributed to an error in its electronic ordering system.

The EPA is expected to compel VW to issue a recall notice in order to remedy the current emissions problem, which could take up to a year after identifying the appropriate corrective action and a recall plan.

Jalopnik:

http://jalopnik.com/volkswagen-tells-dealers-to-halt-sales-of-new-tdi-cars-1731923302

Volkswagen Tells Dealers To Halt Sales Of New TDI Cars Amid Diesel Cheating Scandal

Alanis King

Following the government investigation of Volkswagen's diesel emissions, The Detroit News reports the automaker ordered its U.S. dealerships to halt sales of new 2016 and remaining 2015 TDI car models with 2.0-liter diesel engines.

According to the Environmental Protection Agency and California Air Resources Board, VW dodged federal emissions requirements for some 482,000 of its diesel cars — including the Passat, Jetta, Golf, Beetle, SportWagens and Audi A3 — manufactured from 2009 to 2015. The models contain a "defeat device" which exists to detect when the car is under testing conditions, allowing for it to activate the full emissions-control systems only in those circumstances.

In other words, environmental officials say that the street cars are emitting between 10 and 40 times the amount of allowable nitrogen oxide pollution, which is not only illegal but harmful to both the environment and public.

The EPA is taking action on 2016 diesel models. Christopher Grundler, director of the EPA Office of Transportation of Air Quality, said that the government will not grant VW a "certificate of conformity" to sell the 2016 models with 2.0-liter diesel engines, meaning they cannot be sold.

VW dealers have been waiting for the 2016 models to replenish showrooms. Most U.S. VW dealers don't have any remaining 2015 diesel cars to sell.

VW is barred from selling 2016 model vehicles with the 2.0 liter diesel engine until "they get answers to the questions of how these vehicles are being operated. Volkswagen couldn't explain why we're getting these excess emissions," Grundler said.

Meanwhile, whatever 2015 models remain on lots have also been ordered not to be sold. As Automotive News notes, four-cylinder TDI models account for 20 to 25 percent of VW's U.S. sales, so this is going to hurt.

In addition, VW has ordered an outside investigation to find out what happened and "reverse the damage this has caused," CEO Martin Winterkorn said in an apologetic statement.

According to the EPA, the agency is now checking to see if other automakers are bypassing the laws on diesel engines as well.

While no official recall is underway just yet, the News reports:

EPA said VW violated federal law and, in theory, could face fines of up to $18 billion — $37,500 per vehicle — as well as criminal prosecution. Both agencies issued notices of non-compliance to VW Friday, a step necessary before ordering a recall.

The EPA will not take action to stop VW owners from driving their personal cars until a solution

is made available, but VW did remove its “clean diesel” advertisements from YouTube and television.

CBC News (Canada):

http://www.cbc.ca/news/business/volkswagen-emissions-rigging-1.3236548

Volkswagen shares plunge on emissions rigging scandal

Consumer Reports suspends 'recommended' rating for Jetta and Passat diesels

CBC News Posted: Sep 21, 2015 9:00 AM ET Last Updated: Sep 21, 2015 9:00 AM ET

Volkswagen's CEO apologized but investors were not in a forgiving mood as the company's stock plunged almost 20 per cent Monday following revelations late last week that the automaker had rigged emissions tests for almost 500,000 diesel cars in the U.S.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn said in a weekend statement.

On Friday, the U.S. Environmental Protection Agency (EPA) revealed that half a million diesel-powered VWs had been programmed to bypass emission controls except during emissions tests. The cars include the Audi A3, VW Jetta, Beetle, Golf and Passat models made in the last seven years.

The EPA ordered VW to fix the cars and VW said it would co-operate with regulators. But the damage to the automaker's image is nothing less than catastrophic.

VW had marketed its diesel-powered cars as being better for the environment. The Associated Press reports, citing an anonymous source with knowledge of the matter, that VW has told

dealers to stop selling its 2015 diesel cars with 2.0-litre engines.

The EPA said the VW cars under investigation seemed to pass emissions tests, but in the real world, were actually emitting up to 40 times the national standard for nitrogen oxide, which is linked to asthma and lung illnesses.

Consumer Reports announced it would remove its "recommended" rating from the Jetta and Passat diesels until it can retest the vehicles.

VW could face fines of up to $18 billion US, according to the EPA.

Volkswagen shares plunged 19.4 per cent in Monday trading in Germany, chopping $21 billion Cdn from the market value of the company.

"The company will have to recall nearly 500,000 affected cars, which will cost it millions of dollars, and that's even before the damage to its brand and potential fines," said Michael Hewson, chief market analyst at CMC Markets.

Diesel-powered models account for about a quarter of VW's sales.

Impact in Canada unclear

At this point, it isn't clear what the revelations mean for owners of VW diesels in Canada. Volkswagen Canada told CBC News on Friday that it first learned of the EPA action earlier that morning. It said it would co-operate with Environment Canada "to understand the implications for the Canadian market and what actions, if any, may be required in Canada."

Environment Canada, for its part, said it was in talks with the EPA "to further examine this issue

and assess potential implications for Canada." Environment Canada also said it collaborates on emissions verification activities with the U.S. EPA "to ensure our common environmental outcomes are achieved," and pointed out that its emissions standards are aligned with U.S. standards.

The EPA and Environment Canada both stressed that the effectiveness of a vehicle's air pollutant control devices is not a safety issue. The cars remain legal to drive.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:35 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

NY Times:

http://www.nytimes.com/2015/09/21/business/international/volkswagen-chief-apologizes-for-breach-of-trust-after-recall.html?_r=0

Volkswagen to Stop Sales of Diesel Cars Involved in Recall

By JACK EWING and CORAL DAVENPORTSEPT. 20, 2015

FRANKFURT — Volkswagen said on Sunday that it would halt sales of cars in the United States equipped with the kind of diesel motors that had led regulators to accuse the German company of illegally installing software to evade standards for reducing smog.

John Schilling, a Volkswagen spokesman, said that the company would stop selling 2015 and 2016 Volkswagen and Audi models equipped with 4-cylinder turbo diesel engines, which the company has marketed as “clean diesel.” The company will also stop selling used cars that have the engines, Mr. Schilling said.

He said he did not know how many models would be stuck on dealer lots as a result of the decision. Earlier this month, Volkswagen had said that 23 percent of new cars sold in August in the United States were diesels, or 7,400 vehicles.

The confirmation of the halt in sales came on the same day that Martin Winterkorn, the chief executive of Volkswagen, apologized for conduct that prompted the Environmental Protection Agency to order Volkswagen to recall nearly half a million vehicles.

An employee on the Audi A3 limousine. The recall involves four-cylinder Volkswagen and Audi vehicles from the model years 2009 to 2015. Credit Szilard Koszticsak/European Pressphoto Agency

Volkswagen could face billions of dollars in fines for what the E.P.A. said was a deliberate attempt to evade rules on emissions. The decision to stop sales was first reported by The Wall Street Journal.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Mr. Winterkorn said in a statement.

He said the company would "cooperate fully" with the authorities and order its own independent investigation into the accusations.

In his statement, Mr. Winterkorn did not contest assertions by the E.P.A. that Volkswagen sold cars equipped with software that could detect when periodic state government emissions testing was taking place.

Only during such tests are the cars' full emissions control systems turned on. During normal driving situations, the controls were turned off, allowing the cars to spew as much as 40 times the pollution allowed under the Clean Air Act, the E.P.A. said.

Diesel-driven cars have enjoyed something of a renaissance in recent years, shedding much of their old stigma for being dirty, clanky and sluggish to drive, said Karl Brauer, an analyst at Kelley Blue Book. And in the United States, he said, Volkswagen has clearly led the pack — offering diesel vehicles that performed just like their gasoline counterparts.

"Now, we have to wonder if the technology really advanced as far as we thought at VW," Mr. Brauer said. "They must have had a problem making it work in a way that delivered truly clean diesel. At least clean enough to meet the regulations."

Mr. Brauer said the higher nitrous oxide emissions probably allowed better drivability. Fuel economy also improves with more nitrous emissions, and engines can run cooler, and thus wear out more slowly.

"They must have had a mix of performance, economy and durability that they liked, but realized they couldn't achieve that and still get the emissions," he said.

Diesels in particular are known — and marketed — these days as having tremendous torque, or low-end thrust from a stop. If achieving the required emissions affected the torque, making it anemic, then "drivers are going to scratch their heads, thinking, isn't this why I got a diesel?" Mr. Brauer said.

Volkswagen was going through a difficult period even before the accusations became public on Friday. Mr. Winterkorn recently survived a power struggle with the chairman of Volkswagen's supervisory board, Ferdinand Piëch, a scion of the Porsche family who dominated the company for more than two decades before resigning in April.

Following Mr. Piëch's departure, some analysts have raised questions about whether Mr. Winterkorn would be strong enough to hold together the sprawling Volkswagen empire, which also includes Audi and Bentley luxury cars, Porsche and Lamborghini sports cars, Scania and MAN heavy trucks, and Ducati motorcycles.

Although Volkswagen recently surpassed Toyota as the world's biggest automaker measured by the number of cars sold, it is significantly less profitable than its Japanese rival and far weaker in the United States market.

A push by Volkswagen to increase sales in the United States, which included building a factory in Chattanooga, Tenn., to produce Passat sedans, has fallen short.

"For Volkswagen, it's a huge scandal," said Ferdinand Dudenhöffer, a professor at the University of Duisburg-Essen, who follows the automobile industry. "The timing is extremely unfortunate."

Professor Dudenhöffer said the case could damage all German automakers, which have tried to build acceptance in the United States for diesel engines, a sector in which they believe they have a technological lead.

Until recently, Professor Dudenhöffer said, the United States applied stricter standards to diesel engines than those applied by European regulators. But the European authorities, concerned about the health effects of diesel pollution, have tightened standards, prompting complaints from the auto industry.

Professor Dudenhöffer said that as a result of the E.P.A. action, Mr. Winterkorn could come under pressure to resign.

"Winterkorn was already damaged," Professor Dudenhöffer said. "Now there is an accusation of illegal behavior. This story is not over."

E.P.A. officials issued the car company a notice of violation and said it had admitted to the use of a so-called defeat device.

The recall involves 4-cylinder Volkswagen and Audi vehicles from the model years 2009 to

2015.

The software was designed to conceal the cars' emission of nitrogen oxide, a pollutant that contributes to the creation of ozone and smog, which are linked to a range of health problems, including asthma attacks, other respiratory diseases and premature death.

Disengaging the pollution controls on a diesel-fueled car can yield better performance, including increased torque and acceleration.

California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

Over the next year, E.P.A. officials said, owners of the affected vehicles should expect to receive recall notices from Volkswagen, including information about how to get their cars repaired at no cost to them. The recall covers roughly 482,000 diesel passenger cars sold in the United States since 2009.

Affected diesel models include the 2009-15 Volkswagen Jetta, 2009-15 Beetle, 2009-15 Golf, 2014-15 Passat and 2009-15 Audi A3.

The American investigation could ultimately result in fines or penalties for the company. Under the terms of the Clean Air Act, the Justice Department could impose fines of as much as $37,500 for each recalled vehicle, for a possible total penalty of as much as $18 billion.

The notice of violation came days after the company promoted plans at the Frankfurt International Motor Show to introduce 20 plug-in hybrid or all-electric vehicles by 2020 as part of a campaign to reduce vehicle emissions.

Mr. Winterkorn said in his statement on Sunday that Volkswagen would "do everything necessary in order to reverse the damage this has caused."

"This matter has first priority for me, personally," he said, "and for our entire board of management."

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Financial Times:

http://www.ft.com/intl/cms/s/0/c4f4745c-5f98-11e5-9846-de406ccb37f2.html#axzz3mNpq5JFM

VW apologises for cheating US car exhaust emissions tests

Andy Sharman in London

The chief executive of Volkswagen has apologised and ordered an external investigation into findings that the carmaker cheated on US emissions tests to make its vehicles appear less polluting.

In a statement on Sunday, Martin Winterkorn, chief executive of the German carmaker, said the board of management took the findings "very seriously".

He added: "I personally am deeply sorry that we have broken the trust of our customers and the public. We will co-operate fully with the responsible agencies, with transparency and urgency, to clearly, openly and completely establish all of the facts of this case."

The Environmental Protection Agency on Friday said diesel variants of several VW and Audi models sold in the US over six years — including the VW Passat, Beetle and Audi A3 — had been fitted with sophisticated algorithms designed to deceive the laboratory testing regime.

The authorities ordered VW to recall 482,000 cars because of the use of so-called defeat devices

— which use software to detect when the car is being tested and runs treatments to reduce nitrogen oxides. Once out on the road, the cars were discovered to produce pollutants up to 40 times the legal limits.

The discovery leaves the German carmaker — which has admitted to using the defeat devices — potentially facing billions of dollars in fines and warranty costs, possible criminal charges for executives and class-action lawsuits from US drivers.

Mr Winterkorn did not say who would be carrying out the external investigation, and the company declined to provide further details.

It was Mr Winterkorn's first formal statement on an issue that also threatens to seriously undermine its attempts to turnround its sputtering performance in the US.

Max Warburton, analyst at Bernstein Research, said: "The best case for VW is probably still a multibillion-dollar fine, pariah status in the US with government — and possibly consumers — [and] damage to its leading position in diesel in the US."

VW now has to initiate a process to fix the cars' emissions systems, though the EPA has said the violations do not present a safety hazard and the vehicles remain legal to drive and resell. Owners of cars of models covering the 2009-2015 period do not need to take any action, the agency said.

I personally am deeply sorry that we have broken the trust of our customers and the public. We will co-operate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case

- Martin Winterkorn, VW chief

In addition to the costs of the recall campaign, VW could theoretically also face fines of up to $37,500 per vehicle — a total of more than $18bn — though analysts have said VW is likely to face a much lower penalty.

The case is a rare but not unique example of this type of manipulation by the motor industry. In 1998, a group of truckmakers including Navistar, Renault and Volvo paid more than $1bn to resolve claims they installed defeat devices on heavy duty diesel engines. These devices allowed an engine to pass the emissions test, but then turn off emission controls when on the road, the EPA said at the time.

The EPA has been active in the past year, securing a record $300m settlement with Hyundai and Kia over claims the Korean affiliates overstated the fuel economy of their cars.

The Guardian:

http://www.theguardian.com/business/2015/sep/20/vw-software-scandal-chief-apologises-for-breaking-public-trust

VW software scandal: chief apologises for breaking public trust

Martin Winterkorn orders external investigation after US regulators found cars gave inaccurate data on toxic emissions

Volkswagen has ordered an external investigation after US regulators found that the carmaker designed software for close to half a million diesel cars that gave false emissions data, its CEO said, adding he was "deeply sorry" for the violation of US rules.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn said in a statement published on Sunday by the carmaker on Sunday. "Volkswagen has ordered an external investigation of this matter."

The US Environmental Protection Agency (EPA) said on Friday the software deceived regulators measuring toxic emissions, adding that Volkswagen could face fines of up to $18bn

(£11.5bn) as a result. The carmaker could face penalties of $37,500 for each car not in compliance with clean air rules. The diesel-powered models from 2009-2015 are the VW Jetta, Beetle and Golf, the Passat model from 2014-15, and the Audi A3 from 2009 to 2015.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," said Winterkorn, adding the company was fully co-operating with the relevant agencies. He gave no details on who would carry out the external investigation.

Cynthia Giles, an enforcement officer at the EPA, said on Friday that the cars in question "contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test".

"VW was concealing the facts from the EPA, the state of California and from consumers. We expected better from VW," she said. "Using a defeat device in cars to evade clean air standards is illegal and a threat to public health."

The EPA accused Volkswagen of using the device in 482,000 four-cyclinder Volkswagen and Audi diesel cars in the US since 2008. VW must recall all the cars, remove the defeat device and improve the cars' NOx emissions, which creates smog and has been linked to increased asthma attacks and other respiratory illnesses.

The feature, which the EPA called a defeat device, masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, said Giles.

Volkswagen suspended sales of cars containing the company's four-cylinder turbo direct injection (TDI) engine on Friday in light of the investigation. The "clean diesel" engine is commonly used in models including VW's Beetle, Golf, Jetta, Passat and the A3 luxury compact made by VW-owned Audi.

Richard Corey, executive officer of the California Air Resources Board (Carb), said on Friday: "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply

into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The EPA and Carb discovered the defeat device software following independent analysis by researchers at West Virginia University, who were promoted into action by the International Council on Clean Technology, an NGO.

When confronted with the EPA and Carb's evidence, VW admitted that its cars were fitted with the defeat device.

The crackdown on Volkswagen comes as the Obama administration is attempting to cut air pollution from an array of sources, including the vehicle industry, power plants and oil and natural-gas providers. The EPA set new carbon rules for big trucks earlier this year and has told all vehicle makers they must sell light vehicles averaging 54.5 miles a gallon by 2025.

In Europe, new laws have forced manufacturers to test their cars under real world conditions and not in laboratories, helping to reduce unrealistic claims about emissions. By 2017 all new cars will have to be more stringently tested, effectively ending an era when car makers could exaggerate the performance of their machines.

UK car industry group the SMMT claims that, because of European legislation to cut tailpipe pollution, Britain's air quality is better now than it has been for centuries.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:26 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

The Hill:

http://thehill.com/policy/energy-environment/254323-volkswagen-head-apologizes-for-epa-accusations

Volkswagen head apologizes after EPA accusations

By Timothy Cama - 09/20/15 01:28 PM EDT

The head of German automaker Volkswagen Group apologized Sunday after allegations surfaced that his company deliberately tried to evade United States air pollution laws.

Martin Winterkorn, the company's chief executive officer, said he was "deeply sorry" for violating the trust of customers and the public, and said that Volkswagen had ordered an external investigation into the matter.

Volkswagen faces up to $18 billion in fines for the violations under the Clean Air Act, under which the Environmental Protection Agency (EPA) sets air pollution rules for motor vehicles.

"We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case," Winterkorn said in a Sunday statement

"We do not and will not tolerate violations of any kind of our internal rules or of the law."

Winterkorn stopped short of admitting to the EPA's allegations.

On Friday, the EPA said it had discovered that about 482,000 diesel vehicles sold by VW and its subsidiary Audi in the United States had "defeat devices" that detect when the vehicle is undergoing an EPA emissions test and turn on equipment that controls output of nitrogen oxides to acceptable levels.

At all other times, the EPA said, the vehicles emitted more pollutants, sometimes exceeding allowable volumes by 40 times.

The agency has not yet officially charged Volkswagen with any civil or criminal penalties, nor did it order any recalls of the affected vehicles. California, which has its own emissions regulations, is also accusing the company of violating air rules.

"We at Volkswagen will do everything that must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused," Winterkorn said, adding that the issue is the top priority for him and the entire management team.

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Reuters:

http://www.reuters.com/article/2015/09/21/usa-volkswagen-idUSL1N11R0L020150921

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

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Christian Post:

http://www.christianpost.com/news/volkswagen-to-recall-almost-500000-cars-in-the-us-over-epa-violation-145778/

Volkswagen to recall almost 500,000 cars in the US over EPA violation

BY LORRAINE CABALLERO , CHRISTIAN POST CONTRIBUTOR

Volkswagen will recall almost 500,000 vehicles released from 2009 to 2015 in the United States after the carmaker allegedly violated the law by using illegal software, which helped it go past environmental restrictions.

The Environmental Protection Agency (EPA) said Volkswagen broke the law by installing a "defeat device" in Volkswagen and Audi units with four-cylinder turbo diesel engines released from the year 2009 to 2015. Under normal driving conditions, the emission control devices installed in the said cars worked with reduced efficacy, according to the Dispatch Times.

In the wake of the violation, Volkswagen chief executive Martin Winterkorn delivered a statement apologizing to their customers and vowing to cooperate with EPA's investigation. However, he did not deny the allegations regarding the illegal software, the International Business Times reports.

"I personally am deeply sorry that we have broken the trust of our customers and the public," said Winterkorn in his statement.

Because of the notice of violation from the EPA, Volkswagen is now facing penalties amounting to more than $18 billion, or around $37,500 per unit, based on the U.S.A. federal Clean Air Act. EPA and CARB discovered the illegal software after researchers at the West Virginia University conducted an independent study in cooperation with the global Council on Clean Transportation, the report adds.

Volkswagen has been struggling to sell cars in the United States because of the rising cases of asthma and other respiratory illnesses caused by air pollutants. The diesel vehicles affected by the recall were being counted on to pull up the company's sales in the United States.

Based on the findings of the EPA, Volkswagen had included a certain algorithm in the cars' emissions software that could detect when an emission test is being conducted.

Owners of the diesel cars affected by the recall will be notified by Volkswagen by next year, EPA said. Until Consumer Reports can "retest" the said cars, the recommended rating for the Passat, Jetta, Golf, Beetle, and Audi A3 luxury compact will remain on hold, the report relays.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:14 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

AP (via Boston Globe):

https://www.bostonglobe.com/business/2015/09/20/chief-sorry-after-epa-says-firm-skirted-clean-air-law/3NNTCf2cVxUI1qYNBfMe7L/story.html

Volkswagen chief apologizes for rigging tests of emissions

By Paul Wiseman and Tom Krisher ASSOCIATED PRESS SEPTEMBER 21, 2015

WASHINGTON — The chief executive of Volkswagen apologized Sunday and VW customers said they felt duped after the Environmental Protection Agency revealed that the German automaker had skirted clean air rules by rigging emissions tests for about 500,000 diesel cars.

''I personally am deeply sorry that we have broken the trust of our customers and the public,'' Volkswagen chief Martin Winterkorn said in a statement. He said VW has ordered an investigation and promised that the company would cooperate with regulators.

On Friday, the EPA said VW used software that allowed its diesel cars to release fewer smog-causing pollutants during tests than in real-world driving conditions.

The cars, built in the last seven years, include the Audi A3, VW Jetta, Beetle, Golf, and Passat models. The agency ordered VW to fix the cars at its own expense. VW also faces fines that could add up to billions of dollars.

VW edged out Toyota to become the world's top-selling automaker in the first half of 2015. But a hit to its reputation from the emissions revelations could hamper its efforts at a sales rebound in the United States. Between 2013 and 2014, VW sales plummeted 10 percent, even as overall industry sales rose 6 percent. US buyers want SUVs, and Volkswagen doesn't have competitive vehicles to offer them.

The magazine Consumer Reports almost immediately suspended its ''recommended'' rating on the Jetta and Passat diesels until it can get recall repairs and retest the cars.

Volkswagen marketed the diesel-powered cars, which account for about 25 percent of its sales, as being better for the environment. After the EPA acted, VW withdrew ads for its diesel cars from Youtube.com and asked dealers to stop selling 2015 diesel cars with 2.0-liter engines, according to a person familiar with the matter.

Some VW customers were furious.

Zeeshan Shah, 39, of Fulton, Md., said that he bought a Volkswagen Diesel Passat 2015 in July after he totaled his Jetta two years ago.

''The selling point" for the Diesel Passat was that the technology was so good, he said. Now, Shah plans to return the car back to the dealer to have it examined and doesn't want to buy another Volkswagen. ''Once they cheat you on this issue, what other issues can they cheat you on?'' he said. ''You don't trust them.''

John German, senior fellow at the International Council on Clean Transportation, the group that blew the whistle on VW, said it didn't expect to find any violators when it contracted with West

Virginia University to test cars with diesel engines.

The council, a research group that helps governments write regulations, did the US tests in an effort to show that automakers were complying with US nitrogen oxide emissions standards, which are stricter than in other countries, he said.

The EPA said VW faces fines of up to $37,500 per vehicle for the violations, a total of more than $18 billion.

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WSJ:

http://www.wsj.com/articles/volkswagen-ceo-apologizes-after-epa-accusations-1442754877

Volkswagen Halts U.S. Sales of Certain Diesel Cars

Auto maker also begins external probe after EPA accuses company of dodging emissions rules

By WILLIAM BOSTON, AMY HARDER and MIKE SPECTOR

Updated Sept. 20, 2015 8:57 p.m. ET

Volkswagen AG's crisis over allegedly cheating on U.S. emissions tests deepened, with the German auto maker halting American sales of popular diesel-powered cars and issuing a sweeping apology for violating customers' trust.

It also launched an external investigation. Shares in the company slumped more than 20% in early trading Monday in response to the crisis.

The company could face billions of dollars in fines and the crisis could further weaken Volkswagen Chief Executive Martin Winterkorn's position. He narrowly survived efforts by a

major shareholder to oust him earlier this year and was passed over for the chairman's job, the company's top post, this month.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Mr. Winterkorn said in a statement issued by the company on Sunday, adding that VW is cooperating with authorities and has commissioned an external probe.

The U.S. is crucial in Volkswagen's efforts to become the world's leading auto maker by sales. The German company has built its campaign to grow in the U.S. market on a promise that its clean-diesel engines deliver better performance and low emissions. It is neck-and-neck with reigning sales leader Toyota Motor Corp. and overtook the Japanese car maker during the first half of this year. But the emissions test probes could stall its progress.

Even prior to the emissions issue, the auto maker's namesake Volkswagen brand has been battling declining sales in the U.S. market. And Audi AG, its luxury car maker, is finding it hard to catch up in the U.S. with rivals BMW AG and Daimler AG, which makes Mercedes-Benz vehicles.

On Friday, the U.S. Environmental Protection Agency and the California Air Resources Board alleged that Volkswagen used software, dubbed a "defeat device," in the cars to make diesel-powered engines appear to have lower levels of emissions than they actually did.

About 482,000 Volkswagen diesel-powered cars were affected.

The EPA probe could force Volkswagen and its Audi unit to recall thousands of vehicles that contain the company's "clean diesel" engines. The four-cylinder 2.0-liter turbo direct injection, or TDI, engine is commonly found in Volkswagen's Passat, Jetta, Golf, Beetle and in Audi's A3 luxury compact model.

A Volkswagen spokesman on Sunday said the auto maker halted the sale of all 2015 and 2016 models containing the four-cylinder 2.0 liter TDI engine. The EPA investigation affects cars sold since 2008. The company hasn't issued a recall, the spokesman said.

Realization that Volkswagen may have cheated to get better emissions results could undermine its U.S. recovery and further weaken its shares, which are down 37% from their peak on March 16, said analysts.

"There is no way to put an optimistic spin on this—this is really serious," said Max Warburton, an analyst with Bernstein Research. "The best case for VW is probably still a multi-billion dollar fine."

Consumer Reports, an influential magazine when it comes to car reviews, last week suspended "recommended" ratings on the auto maker's Jetta and Passat diesel-engine models after the EPA disclosed its allegations. Consumer Reports said the recommendations would be suspended until it can retest the vehicles once they are repaired. The magazine said it would then assess whether the cars' fuel economy worsened.

A production line at a Volkswagen plant in Wolfsburg, Germany. ENLARGE

A production line at a Volkswagen plant in Wolfsburg, Germany. PHOTO: REUTERS

Laurie Cleveland, a 54-year-old English teacher from Lowville, N.Y., said she bought a new 2015 VW Passat TDI over the Labor Day weekend. She isn't sure what to do now. She said it is her fourth Volkswagen diesel car since 2006.

"I feel like I've been deceived," she said. "I'm a person who likes to be environmentally friendly," she added.

Mr. Winterkorn on Sunday vowed to do "everything necessary" to regain public trust in the company.

"We do not and will not tolerate violation of any kind of our internal rules or of the law," he said. "This matter has first priority for me."

U.S. officials said Volkswagen violated two parts of the federal Clean Air Act and could face fines of as much as $37,500 per car, or more than $18 billion. It remained unclear whether the government would seek such an onerous penalty.

The EPA in November 2014 hit South Korean auto makers Hyundai Motor Co. and Kia Motors Corp. with a record $100 million penalty for overstating fuel-economy claims and forced the companies to cough up another $200 million in regulatory credits.

The EPA has said the vehicles remain safe and legal to drive. The agency is working with the Justice Department and an investigation is continuing.

Officials alleged that Volkswagen used software that activates full emissions controls only during testing but then reduces their effectiveness during normal driving. The result is that cars can emit nitrogen oxides at up to 40 times the allowable standard, the agency said. Diesel-powered cars are a small part of overall U.S. car and light-truck sales.

Experts say that the software enables cars to get better fuel economy at the expense of higher nitrogen-oxide emissions, which was likely one reason VW was using them, according to Margo Oge, who recently retired as director of the EPA's Office of Transportation and Air Quality after more than 30 years at the agency.

Volkswagen's apparent motivations on the emissions tests were unclear. An EPA spokeswoman has said it would be "premature to speculate on why VW did this."

A Volkswagen spokesman in Wolfsburg, Germany, on Sunday said, "We are now in the investigation phase and have no comment beyond what is in the statement that we published today."

California is separately investigating the auto maker.

The International Council on Clean Transportation, a nonprofit research organization that works with governments to cut air pollution from mobile sources, and West Virginia University researchers uncovered Volkswagen's alleged use of defeat devices in research and testing over the last couple of years.

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Reuters:

http://www.reuters.com/article/2015/09/20/us-usa-volkswagen-ceo-idUSKCN0RK0IK20150920

Volkswagen to halt U.S. sales of some 2015 diesel cars

FRANKFURT/HAMBURG | BY CHRISTOPH STEITZ AND JAN SCHWARTZ

Volkswagen (VOWG_p.DE) told U.S. dealers to halt sales of some 2015 diesel cars after regulators found software it designed for the affected vehicles gave false emissions data, the company said Sunday, announcing it had launched an investigation.

In a statement published by the carmaker on Sunday, Chief Executive Officer Martin Winterkorn said, "I personally am deeply sorry that we have broken the trust of our customers.

"Volkswagen has ordered an external investigation of this matter," he said.

The U.S. Environmental Protection Agency (EPA) said on Friday the software deceived regulators measuring toxic emissions, adding that Volkswagen could face fines of up to $18 billion as a result.

The Detroit News reported late Friday that VW dealers still had some 2015 diesel Jetta, Passat and Beetle cars for sale.

A VW representative on Sunday confirmed the partial halt of sales of the affected vehicles but did not give any numbers.

Winterkorn said, "We do not and will not tolerate violations of any kind of our internal rules or of the law," adding that the company was fully cooperating with the relevant agencies.

He gave no details on who would carry out the external investigation.

"This is not your usual recall issue, an error in calibration or even a serious safety flaw," Bernstein analysts wrote in a note on Sunday. "There is no way to put an optimistic spin on this - this is really serious."

Cynthia Giles, an enforcement officer at the EPA, said on Friday the cars in question "contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test".

The feature, which the EPA called a "defeat device," masks the true emissions only during testing. When the cars are on the road, they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

"We have admitted to it to the regulator. It is true. We are actively cooperating with the regulator," a Volkswagen spokesman said on Sunday.

Volkswagen could face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. Some 482,000 four-cylinder VW and Audi diesel cars sold since 2008 are involved in the allegations.

If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed during the telephone conference on Friday.

Volkswagen peer Daimler, meanwhile, signaled it may not be subject to the same violation.

"I have a rough idea of what is happening and that it does not apply to us," Daimler Chief Executive Dieter Zetsche said on Sunday at an event in Hamburg.

"But it is much too early to make a final statement on this," he added.

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USA Today:

http://www.usatoday.com/story/money/cars/2015/09/20/volkswagen-ceo-martin-winterkorn-apologizes-epa-clean-air-act-emissions-violations/72519678/

Volkswagen issues sales halt; CEO apologizes on emissions cheating

Nathan Bomey, USA TODAY 8:02 a.m. EDT September 21, 2015

Volkswagen has admitted cheating U.S. diesel emissions tests, sending company shares plunging as much as 23 percent in Frankfurt and potentially leaving the company open to billions of dollars in fines. Bloomberg

Martin Winterkorn ordered an external investigation after the EPA disclosed the violations.

Volkswagen's CEO said he is "deeply sorry" for violating U.S. emissions standards and ordered an external investigation Sunday, two days after the Environmental Protection Agency (EPA) accused the automaker of purposefully manipulating emissions tests for almost 500,000 vehicles.

The German automaker ordered its U.S. dealerships to stop selling cars impacted by the probe until its engineers can deliver a fix.

The EPA accused Volkswagen of installing software on 482,000 diesel cars in the USA that allowed it to cheat emissions tests, potentially exposing people to harmful pollutants at levels of 40 times the acceptable standard and respiratory conditions such as asthma.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn, Volkswagen's CEO, said in a statement. "We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly and completely establish all of the facts of this case." Winterkorn pledged to regain the public's trust.

The violations could expose Volkswagen — the world's largest vehicle manufacturer through the first six months of 2015 — to up to $18 billion in federal fines if the EPA assesses the maximum possible penalty of $37,500 per vehicle.

The violations could invite charges of false marketing by regulators, a vehicle recall and payment to car owners, either voluntarily or through lawsuits. Volkswagen advertised the cars under the "Clean Diesel" moniker.

The state of California is investigating the emissions violations.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," Winterkorn said. The company's board takes the allegations "very seriously," he said.

The EPA accused the German automaker of adopting what it called a "defeat device" to trick U.S. regulators into believing its cars met Clean Air Act standards for nitrogen oxides. Volkswagen admitted to investigators it had installed the defeat device, the EPA said.

The EPA said impacted cars include the 2009 to 2014 Volkswagen Jetta, Beetle and Golf, the 2014 and 2015 Volkswagen Passat and the 2009 to 2015 Audi A3.

Volkswagen told dealers they cannot sell the 4-cylinder diesel versions of those cars until a fix is available, Volkswagen spokesman Mario Guerreiro said Sunday.

The sales halt could put a significant dent in the company's September sales performance. About 20% of Volkswagen's vehicle sales are diesel engines, said AutoPacific analyst Dave Sullivan.

"It totally goes against all of the marketing they have had of a clean diesel," Sullivan said of the violations. "That's one of the biggest selling points for Volkswagen."

"The trust of our customers and the public is and continues to be our most important asset," Winterkorn said Sunday. "We at Volkswagen will do everything that must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused. This matter has first priority for me, personally, and for our entire Board of Management."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 3:22 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Sacramento Bee:

http://www.sacbee.com/news/business/article35709432.html

Regulators order Volkswagen recalls over device used to trick smog tests

BY DALE KASLER

In a joint probe with California air regulators, the federal government Friday told Volkswagen to recall 480,000 diesel-fuel cars, charging the automaker with equipping the cars with software designed to circumvent pollution limits.

The U.S. Environmental Protection Agency and California Air Resources Board sent notices to the German automaker over its alleged use of something called a "defeat device," a piece of software that controls emissions during smog tests but not when the vehicles are actually on the road.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant EPA administrator, in a prepared statement. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules."

The EPA sent Volkswagen a "notice of violation" and told car owners they can expect a recall notice. The agency said all repairs will be done at Volkswagen's expense. It added that the cars are safe to drive. The EPA has the authority to order automotive recalls.

Stanley Young, a spokesman for the ARB, said the federal and state agencies were first notified of the problem by independent researchers at West Virginia University and the International Council on Clean Transportation. Months of followup testing, including tests at an ARB lab in El Monte, confirmed the analyses.

Volkswagen officials in early September "admitted to CARB and EPA staff that these vehicles were designed and manufactured with a defeat device," according to an enforcement letter the California agency sent Friday to Volkswagen officials.

Young said "our major goal is to ensure that these cars come into compliance, that they're the same in the real world as they are on the test bench." The automaker eventually could face fines

or other enforcement actions, he said.

The agencies plan to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," said Richard Corey, executive officer of ARB, in a prepared statement.

The EPA said the recall affects VW Jettas, Beetles, Golfs and Audi A3s made in the 2009 to 2015 model years. It also covers VW Passats made in the 2014 and 2015 model years. Only diesel cars are affected. Young said ARB believes there are as many as 50,000 affected vehicles on the road in California.

Under the federal Clean Air Act, California has the authority to set its own regulatory standards for car emissions.

Volkswagen of America spokesman Darryll Harrison Jr. said the company is cooperating with the federal and state agencies but had no further comment.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 3:10 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

The Atlantic:

http://www.theatlantic.com/technology/archive/2015/09/volkswagens-game-of-make-belief/406159/

Volkswagen's Game of Make-Believe

The company inserted a device into almost 500,000 cars meant to trick emissions testing, the

EPA says.

ROBINSON MEYER

One of the great lessons of the pioneering computer scientist Alan Turing is this: Computers are only pretending machines. Software is always just imitating something else.

Volkswagen seems to have taken this maxim to new heights. The Environmental Protection Agency alleges that the company installed "defeat devices" in its four-cylinder Volkswagen and Audi-brand diesel cars from 2009 to 2015.

These devices, essentially, let the cars pretend to not break the law. The software could sense when the car was undergoing emissions testing and activate its pollution-control systems accordingly. When the car was being driven during normal use, these systems largely did not activate—making the car a much heavier polluter in real-life than it looked on paper.

With those systems deactivated, the car's emissions violated the Clean Air Act and California's state pollution-control regulation.

"Using a defeat device in cars to evade clean-air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance, in a statement.

There are almost 500,000 vehicles on American roads with the devices installed, according to the EPA. Volkswagen must now pay to repair the emissions systems in affected cars. The government may also fine the company as much as $18 billion.

The device was discovered by researchers at West Virginia University, who notified the EPA and California state authorities. The two authorities investigated further, and after demanding "an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices," said a statement from the agency.

I reached out to Volkswagen for comment and haven't heard back yet. The Times reports that the company is complying with investigations.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:58 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Mashable:

http://mashable.com/2015/09/18/volkswagen-recall-emissions/#uL1ctrM4JZkb

Volkswagen urged to recall cars for allegedly cheating emissions test

BY CHRIS PERKINS

Automakers are under intense pressure to meet emissions regulations put in place by the world's governments. Volkswagen allegedly had a slightly different solution.

The U.S. Environmental Protection Agency (EPA) ordered a recall of almost 500,000 Volkswagen and Audi vehicles equipped with four-cylinder diesel engines, for software designed to sidestep emissions regulations, reports the New York Times.

In total, 482,000 vehicles are being implicated, including the 2009-2015 Volkswagen Golf, Beetle, Jetta and Beetle, the 2014-2015 Volkswagen Passat and the 2009-2015 Audi A3. The cars were possibly installed with a "defeat device," a piece of software designed to detect when the car is undergoing emissions testing and turn on all of the car's emissions control systems then. In normal driving, the systems would turn off, causing 40 times larger nitrogen oxide emissions, according to the E.P.A.

Nitrogen oxide is a major contributor to smog, which can lead to increased respiratory problems and premature death.

The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation. The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation.

U.S. regulators hope that this recall will send a message to automakers to not develop software to skirt regulations. Last November, Hyundai and Kia were fined $100 million for violating the Clean Air Act. The two companies inflated their fuel economy figures for their 2012 vehicles.

The likely reason why Volkswagen could go the trouble to develop and use software like this is to boost performance; emissions control equipment tends to suck power out of an engine.

Researchers from West Virginia University, working with the International Council on Clean Transportation, discovered the software, according to the EPA's press release.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time," said a representative for Volkswagen.

A representative for the EPA wasn't immediately available for comment.

It's unclear if this issue only pertains to U.S. model Volkswagens and Audis equipped with four-cylinder diesels, or their world-market counterparts as well.

A report from Jalopnik notes that all of Volkswagen's ads for its diesel models have been deleted from YouTube, apparently at the company's request.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:51 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Christian Science Monitor:

http://www.csmonitor.com/Business/In-Gear/2015/0918/Why-the-EPA-is-forcing-Volkswagen-to-recall-nearly-500-000-cars

Why the EPA is forcing Volkswagen to recall nearly 500,000 cars

Volkswagen AG, the German car manufacturer, is under investigation by California and US emissions regulators for allegedly circumventing emission tests with a new device.

By Corey Fedde, Staff SEPTEMBER 18, 2015

Volkswagen AG is under investigation for circumventing clean air rules.

German automotive company Volkswagen AG is under investigation by California and US environmental regulators. The US Environmental Protection Agency told Reuters Volkswagen allegedly used software to circumvent emissions testing of specific air pollutants.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an EPA enforcement officer, told Reuters via teleconference.

The feature, known as a "defeat device," is allegedly present in 4 cylinder Volkswagen and Audi vehicles from 2009-2015, which total nearly 500,000 vehicles. The device is programmed to detect when the car is undergoing an emissions test and turn on the full emissions controls. The device then turns the emission controls off during normal driving. The result being far more pollution than the company reported, the EPA told The New York Times.

The pollutant the "defeat device" is designed to conceal, nitrogen oxide, has been linked by public health officials to variety of health problems, including asthma.

The 500,000 diesel vehicle models affected include 2009-2015 Volkswagen Jettas, Beetles, Golfs, Passats, and Audi A3s.

The violation and investigation belie a growing trend in more aggressive environmental enforcement from federal regulators. In November 2014, the administration announced its largest ever penalty for a violation of the Clean Air Act on Korean automakers Hyundai Motor and Kia Motors. The fine involved a $300 million settlement for overstating vehicle fuel-economy standards on more than 1 million cars.

According to The New York Times, analysts say the crackdown is meant to send a clear message to automakers that circumventing federal rules will not be tolerated.

California, the EPA, and the Justice Department are working together on the investigation.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health. Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations," Ms. Giles told the Times.

This report includes material from Reuters.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:27 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Reuters:

http://www.reuters.com/article/2015/09/18/us-usa-volkswagen-idUSKCN0RI1VK20150918

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG (VOWG_p.DE) could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:40 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

The Hill:

http://thehill.com/policy/energy-environment/254188-epa-accuses-vw-of-going-around-federal-emissions-standards

Feds accuse VW of going around federal emissions standards

By Devin Henry - 09/18/15 12:50 PM EDT

The Environmental Protection Agency (EPA) is accusing Volkswagen of looking to circumvent federal air pollutant emission standards for the last six years.

EPA officials alleged Friday that about 482,000 VW vehicles sold since 2008 violate the Clean Air Act due to software installed on the vehicles that turns off required air pollution protections.

Janet McCabe, an acting assistant administrator, said the EPA "intends to hold VW responsible to recall the vehicles" and fix the emissions problem. The company could face up to an $18 billion fine for the violations.

The EPA issued VW a Clean Air Act violation notice Friday, alleging it used a software algorithm on certain vehicles that would turn on emission controls only when they undergo official emissions testing.

This "defeat device," the EPA said, would switch off those controls during normal operation, which means the vehicles could emit up to 40 times the amount of nitrogen oxide allowed under federal air pollution standards.

"These violations are very serious … not only because they result in excess emissions, but also because VW was concealing the fact from EPA, the state of California and from consumers," Assistant Administrator Cynthia Giles said. "We expected better from VW."

Federal law requires manufacturers to certify to the EPA that their cars meet emissions standards before selling their vehicles in the U.S. Cars with defeat devices cannot be certified, the EPA said.

A VW statement said only that the company had received the violation notice and is cooperating with the investigation.

The EPA and the California Air Resources Board discovered the defeat device during an analysis

at West Virginia State University, the EPA said. Officials said their investigation into the incident is ongoing and wouldn't give many more details about how it developed or what the outcome might be.

The agency is not ordering a recall or announcing penalties at the moment, and officials said the cars are safe and legal to drive. The Friday announcement, Giles said, was meant to "inform the public right away and to put VW on notice of our continuing investigation."

The EPA said the announcement covers VW Jettas, Beetles, Golfs and Audi A3s with model years between 2009 and 2015, as well as the VW Passat with model years 2014 and 2015.

Fortune:

http://fortune.com/2015/09/18/volkswagen-recall-epa-smog/

Volkswagen ordered to recall almost a half-million cars over emissions trick

by Benjamin Snyder

The Environmental Protection Agency is ordering Volkswagen to recall nearly a half-million cars after the company allegedly used a computer software trick to make the cars seem more environmentally friendly during state emissions tests.

The VW models involved include the diesel versions of the following models: The 2009-15 Volkswagen Jetta, the 2009–15 Beetle, the 2009–15 Golf, the 2014-15 Passat and the 2009-15 Audi A3. The recall affects 482,000 vehicles in total.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance Assurance, in a statement. "Working closely with the California Air Resources

Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen says. "VW is cooperating with the investigation; we are unable to comment further at this time."

Auto Guide:

http://www.autoguide.com/auto-news/2015/09/volkswagen-used-illegal-software-to-cheat-emissions-tests-epa.html

Volkswagen Used Illegal Software to Cheat Emissions Tests: EPA

By Stephen Elmer Sep 18, 2015

Volkswagen may be forced to recall almost 500,000 diesel passenger cars after an investigation revealed illegal software was allowing the vehicles to pass government emissions standards.

A software algorithm, known as a defeat device, used on roughly 482,000 Volkswagen vehicles with four-cylinder diesel engines is able to detect when the car is undergoing official emissions testing, and will activate full emissions controls only during the test.

The EPA says that this results in cars that meet emissions standards while being tested, but emit 40 percent more nitrogen oxides while driving.

Independent analysis at West Virginia University uncovered the defeat devices. After being questioned by the EPA and CARB, Volkswagen admitted that its cars did contain defeat devices.

The EPA says "it is incumbent" on Volkswagen to initiate a recall fix for all the affected cars, although they note that these vehicles are still safe to drive and do not present a safety hazard at this time.

Volkswagen may be liable for civil penalties over the findings, which could total up to $18 billion if the EPA leverages its maximum find of $37,500 per vehicles.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

Models affected by the issue include the 2009-2015 Volkswagen Jetta, Beetle and Gold. The 2009-2015 Audi A3 is also affected, along with the 2014-2015 Passat.

Volkswagen acknowledged that it has received notice of the investigation. "VW is cooperating with the investigation; we are unable to comment further at this time," said the brand.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:36 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Post:

http://www.washingtonpost.com/news/energy-environment/wp/2015/09/18/epa-volkswagen-used-defeat-device-to-circumvent-air-pollution-controls/

EPA: Volkswagen used 'defeat device' to circumvent air pollution controls

By Joby Warrick September 18 at 1:04 PM

The Environmental Protection Agency on Friday accused Volkswagen of installing a software "defeat device" that circumvented pollution controls on nearly a half-million Volkswagens and Audis.

The regulatory agency filed a notice of violation against the German automaker, saying the company deliberately cheated on clean-air rules by installing the software of five of its models since 2008. An EPA statement warned of possible civil penalties and hinted of a future possible recall, saying it was "incumbent on Volkswagen to initiate the process" to fix the affected cars' emissions systems.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the EPA's assistant administrator for EPA's Office of Enforcement and Compliance Assurance.

EPA officials, in a joint probe with California's regulatory agency, determined that Volkswagen had inserted a sophisticated algorithm in the cars' emissions software that could detect when a vehicle was undergoing emissions testing. The software, which the EPA called a "defeat device," would turn on full emissions controls during testing, and switch them off again under normal driving conditions.

As a result, the cars emitted far more pollution–up to 40 times the federal standard for the pollutant known as NOx, a component in urban smog, the EPA said.

The software was installed in Volkwagen's Golfs, Jettas and Beetles and Audi A3s beginning in the model year 2009, and in Volkswagen's Passat models beginning in 2014. EPA officials said no action was required by owners of the car, but they suggested that Volkswagen would be compelled to address the problem.

"Our goal now is to ensure that the affected cars are brought into compliance, said Richard Corey, the executive officer for California's Air Resources Board." He said federal and state agencies intended to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:31 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

Agency says German auto maker circumvented air-pollution standards with software

By AMY HARDER

WASHINGTON—The U.S. Environmental Protection Agency issued a notice on Friday alleging that Volkswagen AG circumvented air-pollution standards with software installed on nearly a half million cars sold in the U.S. since 2008.

Officials said Volkswagen could face penalties of up to $37,500 per vehicle, or a total of more than $18 billion, though it remained unclear whether the government would eventually levy such a large penalty. Officials said the German auto maker violated the federal Clean Air Act.

The agency said that owners of these cars don't need to take any action right now and that while the cars have emissions exceeding federal standards, "these violations do not present a safety

hazard and the cars remain legal to drive," according to the EPA.

Officials said a recall hasn't been announced and an investigation continues. They plan to at some point order Volkswagen to fix the vehicles, officials said.

Top EPA officials made the announcement alongside the California Air Resources Board, which is separately investigating the alleged use of the software, which EPA describes as a "defeat device." The software reduces the effectiveness of a car's emission control system during normal driving conditions and enables the car to emit nitrogen oxides at up to 40 times the allowable standard, according to the EPA.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance at the EPA.

"Volkswagen Group of America Inc., Volkswagen AG and Audi AG received today notice from the U.S. Environmental Protection Agency, U.S. Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen said in a statement. "VW is cooperating with the investigation; we are unable to comment further at this time."

EPA said that its allegations cover roughly 482,000 diesel passenger cars with model years between 2009 and 2015 and sold in the U.S. since 2008. They include the following models: the Jetta, Beetle, Audi A3, Golf and Passat.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the "defeat device" software, Volkswagen was violating two parts of the Clean Air Act.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:19 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John;

Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

NPR:

http://www.npr.org/sections/thetwo-way/2015/09/18/441467960/volkswagen-used-defeat-device-to-skirt-emissions-rules-epa-says

Volkswagen Used 'Defeat Device' To Skirt Emissions Rules, EPA Says

BILL CHAPPELL

Saying Volkswagen violated the Clean Air Act, the Environmental Protection Agency says the company's diesel-powered cars have sophisticated software that detects emissions testing – and "turns full emissions controls on only during the test."

Installed on four-cylinder cars, the software, which the EPA calls a "defeat device" that's meant to trick official tests, allowed diesel Jettas, Beetles, and other cars to "emit up to 40 times more pollution" than allowed under U.S. emission standards.

The agency says that after the carmaker was confronted with emission test results this month, it admitted that the cars contain defeat devices.

Volkswagen must now fix the cars' emissions control systems, the agency says, adding that Volkswagen could be liable for civil penalties and other punishment. The cars in question are popular Volkswagen and Audi models that were made from 2009 to this year.

The affected diesel cars include:

• Jetta (Model Years 2009 – 2015)

• Beetle (Model Years 2009 – 2015)

• Audi A3 (Model Years 2009 – 2015)

• Golf (Model Years 2009 – 2015)

• Passat (Model Years 2014-2015)

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance.

The Verge:

http://www.theverge.com/2015/9/18/9352757/epa-volkswagen-recall-emissions

Volkswagen ordered to recall 500,000 cars for gaming emissions testing

By Colin Lecher

The federal government has ordered Volkswagen to recall almost 500,000 vehicles, saying the company unlawfully used special software to get around missions regulations.

VOLKSWAGEN ALLEGEDLY USED A "DEFEAT DEVICE."

Volkswagen allegedly used a so-called "defeat device" on certain models made in the past six years. The device works by only turning on emissions control when undergoing emissions testing, but not when the car is actually being driven normally and pollution is at its peak. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," the EPA said in

a statement.

Using such a device is a violation of the Clean Air Act, which, as The New York Times points out, the EPA has been increasingly cracking down on. In November, the agency hit Hyundai and Kia with a record $100 million fine for violations under the act.

The cars affected by the recall include the 2009 to 2015 Jetta, Beetle, Golf, and Audi A3. The 2014 and 2015 Passat is also included. According to the EPA, that adds up to 482,000 cars.

Jalopnik:

http://jalopnik.com/epa-orders-volkswagen-to-recall-482-000-diesel-cars-for-1731665972

EPA Orders Volkswagen To Recall 482,000 Diesel Cars For Cheating On Emissions

Patrick George

The New York Times reports Volkswagen has been ordered by the Environmental Protection Agency to recall 482,000 diesel cars in the U.S. over software they say was intentionally designed to circumvent smog regulations.

The cars, all diesels from 2009 to 2015, have a "defeat device" programmed to detect when the car is undergoing official emissions testing that only then turns on the full emissions control systems, the Times reports.

These controls are turned off in other situations, leading to far greater emissions than VW let on — which is against the law. The devices were designed to conceal nitrogen oxide emissions.

It's not immediately clear why VW had such a system on these cars, how the system detected official testing versus normal driving, or if the cars operated differently in normal driving when the defeat device was off. What effect did reducing NOx emissions have on fuel economy or performance?

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

The state of California and the Justice Department are also investigating the violation, the paper reports.

The vehicles affected are the 2009-2015 diesel Jetta, Beetle, Golf, Passat and Audi A3.

More on this as we get it.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:10 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit Free Press:

http://www.freep.com/story/money/cars/2015/09/18/epa-volkswagen-used-software-skirt-emissions-rules/72399372/

EPA: Volkswagen used software to skirt emissions rules

By Greg Gardner

The U.S. Environmental Protection Agency and California are accusing Volkswagen of violating the Clean Air Act by using software that allows hundred of thousands of VW and Audi diesel-powered cars to get around emission standards.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for enforcement and compliance assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The agency's notice of violation covers about 482,000 diesel cars sold between 2009 and 2015 model years.

Affected diesel models include:

Jetta (model years 2009 – 2015)

Beetle (model years 2009 – 2015)

Audi A3 (model years 2009 – 2015)

Golf (model years 2009 – 2015)

Passat (model years 2014-2015)

California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board (CARB) have both initiated investigations based on Volkswagen's alleged actions.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said CARB executive officer Richard Corey. "Our goal is to ensure that the affected cars are brought into compliance, to dig

more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The federal and California regulators say Volkswagen used a sophisticated software algorithm on certain Volkswagen vehicles that detects when the car is undergoing official emissions testing and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations.

As a result the cars met emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the permissible standard. The software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

Corey said testing groups in Europe found information that indicated Volkswagen may have manipulated its emission tests and told California regulators about their suspicions.

NOx pollution contributes to nitrogen dioxide, ground-level ozone and fine particulate matter. Exposure to these pollutants has been linked with a range of serious health effects, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, elderly people and those with pre-existing respiratory disease are particularly at risk for health effects of these pollutants.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified. By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, Volkswagen violated two important provisions of the Clean Air Act.

EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization. The researchers raised questions about emissions levels, and the

agencies began further investigations into the issue. In September, after EPA and CARB demanded an explanation for the emission problems, Volkswagen admitted that the cars contained defeat devices.

VW may be liable for civil penalties of up to $37,500 per vehicle found to be violating the standard, or potentially more than $18 billion.

It is incumbent upon Volkswagen to initiate the process that will fix the cars' emissions systems. Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time.

Wired:

http://www.wired.com/2015/09/epa-accuses-volkswagen-cheating-emissions-testing-482000-cars/

EPA ACCUSES VOLKSWAGEN OF CHEATING EMISSIONS TESTING ON 482,000 CARS

Alex Davies

THE EPA IS accusing Volkswagen of illegally using software to cheat emissions standards, allowing the German automaker to sell half a million cars that produce smog at 40 times the legal limit.

In a notice of violation of the Clean Air Act sent to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc today, the EPA said diesel-powered VW cars used a "defeat device," a kind of "a sophisticated software algorithm [that] detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations."

The accusation applies to 482,000 diesel-powered, four-cyclinder Jetta, Beetle, Audi A3, Golf, and Passat cars sold between 2008 and 2015 in the US. The news comes as the Frankfurt motor show, one of the biggest events of the year for the automaker, opens to the press. VW will be required to fix the problem, at no cost to car owners.

The Week:

http://www.theweek.com/speedreads/578080/epa-catches-volkswagen-blatantly-cheating-smog-tests

EPA catches Volkswagen blatantly cheating on smog tests

Jeva Lange

Almost half a million Volkswagen cars, including recent diesel models of Jettas, Beetles, Audi A3s, Golfs, and Passats, may be recalled in an enormous crackdown on the German carmaker's alleged blatant circumvention of smog standards, The New York Times reports.

The Environmental Protection Agency has demanded that the cars be recalled, and specifically accused Volkswagen of installing software, called a "defeat device," in their cars that basically just lies about what a car's emissions are during tests:

The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said. [The New York Times]

Car emissions contain nitrogen oxide, which creates smog, as well as pollutants that cause asthma.

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To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

LA Times:

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Volkswagen is accused of sidestepping emissions rules, 'cheating' pollution tests

By JERRY HIRSCH

Federal and California environmental regulators accused Volkswagen of using software that "cheats" pollution testing in nearly 500,000 recent model VWs and Audis by circumventing emission standards in its diesel cars.

The German automaker will eventually have to recall all of the vehicles and change the emissions systems at its own expense, regulators said. Additionally it could face a fine of about $18 billion, or $35,500 per car, federal environmental officials said.

The Environmental Protection Agency on Friday issued the German automaker a "notice of violation" of the Clean Air Act for both VW models and the company's Audi luxury brand. It covers models equipped with four-cylinder diesel engines. The California Air Resources Board issued a similar letter.

Volkswagen and Audi vehicles from model years 2009-2015 have the software, which uses an algorithm that detects when the vehicle is undergoing pollution tests and changes the way it performs from when it is being driven on the open road.

It "is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "EPA is committed to making sure that all automakers play by the same rules."

"We expected better from VW," Giles said.

Air Resources Board Executive Officer Richard Corey said the California agency wants to bring the cars "into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

Volkswagen said it is cooperating with the investigation.

"We are unable to comment further at this time," the company said in a statement.

The affected diesel models include: Jetta (model years 2009 – 2015,) Beetle (model years 2009 – 2015,) Audi A3 (model years 2009 – 2015,) Golf (model years 2009 – 2015) and Passat (model years 2014-2015.)

International Business Times:

http://www.ibtimes.com/volkswagen-audi-recall-500000-cars-broke-environmental-rules-white-house-says-2104099

Volkswagen And Audi Recall: 500,000 Cars Broke Environmental Rules, White House Says

By Christopher Harress

The Obama administration Friday forced car manufacturer Volkswagen to recall nearly 500,000 cars after it was discovered the German automaker had fitted its vehicles with special technology that can beat environmental tests for reducing smog, according to a new report.

The recall, which was imposed after an investigation by the Environmental Protection Agency, is expected to affect four-cylinder Volkswagen and Audi cars that were manufactured between 2009 and 2015.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance, told the New York Times.

"Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

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Sent: Friday, September 18, 2015 12:52 PM
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Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit News:

http://www.detroitnews.com/story/business/autos/foreign/2015/09/18/epa-vw-diesel-vehicles-violated-emissions-rules/72401296/

EPA: 482K VW diesel vehicles violated emissions rules

David Shepardson

Washington — The Environmental Protection Agency and the state of California said Volkswagen AG violated federal law by allowing 482,000 diesel VW and Audi cars sold since 2009 to evade emissions requirements using sophisticated software.

The announcement is a big setback to the German automaker that has made diesel vehicles a big part of its U.S. strategy. VW could face fines or criminal prosecution and must immediately prevent those vehicles from being able to defeat emissions rules.

VW concealed facts but has now admitted wrongdoing, said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "We expected better from VW," she said.

The agencies allege that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air pollutants. California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board have initiated investigations based on Volkswagen's alleged actions.

EPA said the vehicles software "detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test." The vehicles include diesel Golf, Jetta, Sportwagen, Beetle and Audi A3 vehicles built from 2009-2015.

EPA said "the effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a 'defeat device,' as defined by the Clean Air Act."

NOx pollution contributes to nitrogen dioxide, ground-level ozone, and fine particulate matter. EPA said exposure has been linked to serious health issues, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital.

"Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, the elderly, and people with pre-existing respiratory disease are particularly at risk for health effects of these pollutants," EPA said.

This is the latest example of automakers not following the miles per gallon and emissions rules.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Giles. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said Air Resources Board Executive Officer Richard Corey. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The issue first came to the attention of the agencies in 2014 after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels, and the agencies began further investigations into the issue.

In September, after EPA and CARB demanded an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices, the agencies said.

EPA said VW must recall the vehicles. EPA said "owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

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AP (via ABC News):

http://abcnews.go.com/Politics/trump-candidates-criticize-donald-muslim-comments/story?id=33858500

EPA Says VW Intentionally Violates Clean Air Standards

By MATTHEW DALY, ASSOCIATED PRESS WASHINGTON — Sep 18, 2015, 12:42 PM ET

The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.

Bloomberg:

http://www.bloomberg.com/news/articles/2015-09-18/epa-says-volkswagon-software-circumvented-car-emissions-testing

EPA Says Volkswagen Circumvented Car Emissions Tests

Jeff Plungis

Volkswagen AG sold diesel cars with software that circumvented U.S. emissions standards for air pollution, the Environmental Protection Agency said.

The company sold Volkswagen and Audi brand cars from model years 2009-2015 that contained a "sophisticated software algorithm" that detects when the car is undergoing official emissions testing, and turns on full emissions control, the agency said. During normal driving times, the systems don't operate fully, regulators said.

The potential fine is $37,500 per vehicle and 482,000 autos are part of the case, yielding a potential fine of more than $18 billion, Cynthia Giles, EPA assistant administrator for enforcement and compliance, said on a phone call with reporters Friday.

California is also investigating the claims.

Volkswagen said in a statement it is cooperating with the investigation and unable to comment further.

Business Insider:

http://www.businessinsider.com/vw-told-to-recall-500000-cars-after-us-government-accuses-it-of-dodging-clean-air-standards-2015-9

VW told to recall 500,000 cars after US government accuses it of dodging clean air standards

Benjamin Zhang

The Environmental Protection Agency has ordered the recall of 500,000 Volkswagen cars.

According to Coral Davenport of the New York Times, the EPA accused VW of using hidden software — called a "defeat device" — to dodge clean air standard during emissions testing.

“Using a defeat device in cars to evade clean air standards is illegal and a threat to public health,” assistant administrator for the Office of Enforcement and Compliance Assurance said Cynthia Giles said in a statement.

“Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters.”

In response to the recall, Volkswagen issued the following statement to Business Insider.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time."

The recall affects 482,000 diesel powered cars sold in the US since 2008. They include:

Volkswagen Jetta TDI: 2009-20015

Volkswagen Beetle TDI: 2009-2015

Audi A3 TDI: 2009-2015

Volkswagen Golf TDI: 2009-2015

Volkswagen Passat TDI: 2014-2015

This story is developing. We will update when more information is available.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:42 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Examiner:

http://www.washingtonexaminer.com/epa-says-audi-vw-cheating-on-emissions/article/2572404

EPA says Audi, VW cheating on emissions

By JOHN SICILIANO

The Environmental Protection Agency and California regulators charged automakers Volkswagen and Audi on Friday with purposefully violating emission standards in their line of diesel cars.

EPA accused the automakers of using a device in their vehicles to get around the pollution rules. According to EPA, the device regulates emissions, but only turns on and works while emissions are being tested.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for the agency's enforcement office. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

Giles said VW was "concealing facts" about the devices. The vehicle models involved include the popular Jetta, Audi A-3, Passat and the iconic Beetle, and in model years 2009-2015. The violations cover 482,000 diesel passenger cars.

The EPA's announcement isn't a final decision, but is a clear sign that the EPA believes it has a case against the automakers, one that could lead to fines as large as $37,000 per vehicle. All together, the combined fines could pile up to $18 billion.

An EPA statement said "California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board ... have both initiated investigations based on Volkswagen's alleged actions."

"Working with US EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," the California board's CEO Richard Corey said. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

WPTZ:

http://www.wptz.com/money/epa-accuses-vw-of-cheating-on-emission-rules/35352250

EPA accuses VW of cheating on emission rules

Published 12:29 PM EDT Sep 18, 2015

NEW YORK (CNNMoney) —Diesel cars from Volkswagen and Audi cheated on clean air rules by including software that made the cars look cleaner than they actually were, according to federal and California regulators.

The regulators say that the software on the cars turned up the emission controls only when it could tell that the car was being tested.

"The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations," said the Environmental Protection Agency's notice to the company. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides at up to 40 times the standard."

There are nearly 500,000 of the diesel cars on U.S. roads. The models include the VW Jetta, the Beetle and the Golf from model years 2009 through 2015, the Passat from 2014-2015 as well as the Audi A3, model years 2009-2015. The luxury brand is owned by Volkswagen.

Owners of the affected cars do not face health risks according to the EPA and can to continue to drive or sell the cars. But the EPA says that VW will be responsible for fixing the problem.

Volkwagen did not immediately respond to a request for comment.

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City AM:

http://www.cityam.com/224676/volkswagen-told-recall-500000-vehicles-over-emissions

Volkswagen told to recall 500,000 vehicles over emissions

by Catherine Neilan

Volkswagen has been ordered to recall nearly half a million cars in the US by the Obama administration, which claims the German car group used software that was purposely designed to dodge environmental standards for reducing smog.

The US government's Environmental Protection Agency issued the company a notice of violation this afternoon, accusing Volkswagen of having installing a "defeat device" into its four-cylinder Volkswagen and Audi vehicles between 2009 and 2015, according to the New York Times.

The device is programmed to detect when the car is undergoing emissions test, during which time it will turn on its full emissions control systems. These controls are reportedly then turned off when the car is driving in "normal" situations, when the cars pollute more heavily than reported by Volkswagen, the EPA claims.

The government agency estimates that 482,000 diesel passenger vehicles are affected.

Volkswagen could not be contacted at the time of publication.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:33 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Times:

http://www.washingtontimes.com/news/2015/sep/18/epa-volkswagen-used-software-cheat-emissions-tests/

EPA: Volkswagen used 'sophisticated software' to cheat emissions tests

By Ben Wolfgang - The Washington Times - Friday, September 18, 2015

The Obama administration on Friday accused Volkswagen of using a "sophisticated software algorithm" to cheat on emissions testing and mask the fact that some models emit too much harmful pollution.

Some Volkswagen cars from model years 2009 to 2015, the Environmental Protection Agency said, include software that can detect when they're undergoing emissions testing. Full emissions controls were activated only during testing and then automatically shut down during normal operation, the agency charged.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

During normal operation, the "defeat device" allowed Volkswagen cars to emit nitrogen oxides at up to 40 times the federal threshold as laid out in the Clean Air Act.

The EPA has issued "a notice of violation" to the automaker, and the state of California has launched its own investigation into the matter. Volkswagen could face civil penalties for the violations, the agency said.

The allegations apply to about 482,000 diesel passenger cars sold since 2008, including Jettas, Beetles, Audi A3s, Golfs and other models.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:26 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

USA Today:

http://www.usatoday.com/story/money/cars/2015/09/18/epa-accuses-volkswagen-audi-evading-emission-laws/72400018/

EPA accuses Volkswagen, Audi of evading emission laws

Nathan Bomey, USA TODAY 12:12 p.m. EDT September 18, 2015

The German automaker adopted a "defeat device" to trick regulators, the EPA said.

The Environmental Protection Agency on Friday accused Volkswagen of installing software on certain cars in the U.S. to evade federal emission regulations, potentially exposing people to harmful pollutants.

The German automaker adopted what the EPA called a "defeat device" to trick U.S. regulators into believing that its cars met Clean Air Act standards, the federal agency said in a statement.

The agency said 482,000 cars violated federal standards, including four-cylinder Volkswagen cars from 2009-15 and Audi diesel cars from the same period. They included the Volkswagen Jetta, Beetle, Golf and Passat, and the Audi A3.

Volkswagen, whose brands include the luxury Audi lineup, may face fines or other penalties, the EPA said.

The cars are still safe to drive, the EPA said, and owners do not need to take immediate action. But the agency will require Volkswagen to fix the cars for free.

Newsweek:

http://www.newsweek.com/epa-volkswagen-software-cheat-clean-air-rules-373869

EPA: Volkswagen Used Software in Cars to Cheat on Clean Air Rules

BY ZOË SCHLANGER 9/18/15 AT 12:14 PM

A U.S. Environmental Protection Agency investigation has concluded that for years Volkswagen has been installing software in its vehicles that circumvents federal emissions standards for air pollution, the agency announced Friday.

EPA alleges that Volkswagen installed a "sophisticated software algorithm on certain Volkswagen vehicles" that could detect when the car was being tested for emissions. The software would turn full emissions controls on only during the official test. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," EPA said in a press release. They called the software a "defeat device," deliberately installed to evade the Clean Air Act standards.

This "defeat device" was found in several car models, from 2009 models up to 2015 models, according to EPA:

Jetta (Model Years 2009 – 2015)

Beetle (Model Years 2009 – 2015)

Audi A3 (Model Years 2009 – 2015)

Golf (Model Years 2009 – 2015)

Passat (Model Years 2014-2015)

In total, this includes about 482,000 passenger cars.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, EPA's Assistant Administrator for the Office of Enforcement and Compliance Assurance, said in a statement emailed Friday. The agency worked with California regulators to investigate the automobile manufacturer and issue a notice of violation.

"Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," California Air Resources Board Executive Officer Richard Corey said in the statement.

Volkswagen has yet to respond publicly to the EPA allegations. Newsweek has reached out to the company for comment, and we will update if they respond.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:20 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: Volkswagen Clips 9/18/2015

NY Times:

http://www.nytimes.com/2015/09/19/business/volkswagen-is-ordered-to-recall-nearly-500000-vehicles-over-emissions-software.html?_r=0

Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

By CORAL DAVENPORT SEPT. 18, 2015

WASHINGTON — The Obama administration on Friday ordered Volkswagen to recall nearly a half million cars from the road, saying the German automaker used software intentionally designed to circumvent environmental standards for reducing smog.

The Environmental Protection Agency issued the company a notice of violation and accused the company of breaking the law by installing software known as a "defeat device" in 4-cylinder Volkswagen and Audi vehicles from model years 2009-15. The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

The software was designed to conceal the cars' emissions of the pollutant nitrogen oxide, which contributes to the creation of ozone and smog. The pollutants are linked to a range of health problems, including asthma attacks and other respiratory diseases.

The state of California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

The allegations cover roughly 482,000 diesel passenger cars sold in the United States since 2009.

Affected diesel models include the Volkswagen Jetta (model years 2009-15), Volkswagen Beetle (model years 2009–15), Audi A3 (model years 2009–15), Volkswagen Golf (model years 2009–15) and Volkswagen Passat (model years 2014-15).

The notice of violation is part of a broader, more aggressive enforcement effort by federal environmental regulators on the auto industry. Analysts said it was meant to send a clear message to automakers that they will be harshly treated for compromising federal rules.

It follows a November 2014 announcement of the administration's largest-ever penalty for a violation of the Clean Air Act, in which the government fined the Korean automakers Hyundai Motor and Kia Motors a combined $300 million as part of a settlement for overstating vehicle fuel-economy standards on 1.2 million cars.

"They want to make it clear that they're going to crack down on cheaters," said Frank O'Donnell, president of the environmental advocacy group Clean Air Watch. "They're cheating not only car buyers but the breathing public. They want to lay down the law, enforce the law, and show they're not going to tolerate cheaters. The laws and regulation are only as good as the enforcement."

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(model years 2009–15), Audi A3 (model years 2009–15), Volkswagen Golf (model years 2009–15) and Volkswagen Passat (model years 2014-15).

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From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 9/21/2015 5:27:32 PM
Subject: Volkswagen denied deception to EPA for nearly a year
MAIL_CONVERSATION_TOPIC: Volkswagen denied deception to EPA for nearly a year
Created: Fri 3/18/2016 6:18:22 PM

The company's stock plunged on Monday after disclosures that it had illegally installed software that misrepresented the level of pollutants certain models emitted.

View article...

Ex. 5

From: Kaul, Meetu
Sent: Monday, September 21, 2015 1:24 PM
To: Senn, John; Conger, Nick
Cc: Belser, Evan; Werner, Jacqueline
Subject: FW: American Lawyer/ Volkswagen article

Passing on to you for a response. Thanks

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Susan Beck [mailto:SBeck@alm.com]
Sent: Monday, September 21, 2015 1:19 PM
To: Kaul, Meetu
Subject: American Lawyer/ Volkswagen article

Ms. Kaul,

I'm a reporter with The American Lawyer publication, and I'm working on an article about the EPA's action against Volkswagen.

In particular, I'm trying to identify the lawyers who have been representing Volkswagen and the roles they have played.

Stuart Drake from Kirkland & Ellis is copied on the EPA violation letter. Has he been representing Volkswagen during the entire investigation? Have any other lawyers or law firms been involved?

We could talk on background if you prefer.

My deadline is 5 pm ET today.

Thanks,

Susan

Susan Beck

Senior Writer

The American Lawyer

216-925-3113

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To: Ganss, David[GanssD@nrd.nissan-usa.com]; Fernandez, Antonio[fernandez.antonio@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Fernandez, Antonio[fernandez.antonio@epa.gov]
From: Ellies, Ben
Sent: Mon 9/21/2015 5:34:41 PM
Subject: RE: Downfall parody of VW diesels

Ohhhhhh…..

And the Jalopnik article is great too.

Shazam.

Thanks for the heads up.

From: Ganss, David [mailto:GanssD@nrd.nissan-usa.com]
Sent: Monday, September 21, 2015 10:47 AM
To: Fernandez, Antonio; Snyder, Jim; Ellies, Ben; Fernandez, Antonio
Subject: FW: Downfall parody of VW diesels

If you're familiar with the Downfall (Hitler's bunker scene) parody meme, you'll like this:

https://youtu.be/dKef1JFpiCA

David Ganss

Nissan Technical Center North America

A Division of Nissan North America, Inc.

Senior Engineer

Powertrain Technology Research

ganssd@ntcna.nissan-usa.com

PH: +1 248.488.4414

To: Phillips, Anna[Phillips.Anna@epa.gov]
From: .WASH WI-2 Weber, Michael
Sent: Mon 9/21/2015 5:44:51 PM
Subject: EPA charges against VW
removed.txt

Dear Anna,

Good seeing you this morning. As briefly discussed, here are our questions regarding the Volkswagen law suit:

1. What is the judicial/legal process that will now follow (and how is the interplay between EPA and DoJ)?

2. Apart from a federal law suit, is there a possibility that Volkswagen will also face further court action by individual states (or even class action litigation)?

3. We understand the clean air act is the basis for EPA's action. Could you provide us with an overview of similar actions against car makers over the last years which were based on violations of the clean air act?

Many thanks for your help in this time sensitive matter.

Michael

Michael Weber

Energy Policy Advisor

Embassy of the Federal Republic of Germany

4645 Reservoir Road NW

Washington, DC 20007

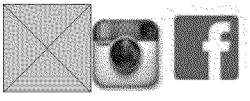
Tel: +1 (202) 298 4381

Fax: +1 (202) 298 4391

E-mail: wi-2@wash.diplo.de

Our Choices Matter - www.transatlantic-climate-bridge.org

www.Germany.info



INVALID HTML

To: Stewart, Gwen[Stewart.Gwen@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
From: Birgfeld, Erin
Sent: Mon 9/21/2015 6:19:48 PM
Subject: FW: Volkswagen

Hi Gwen,

Can you schedule Chris for a 3:45 press interview with Washington Post?

-----Original Message-----
From: Purchia, Liz
Sent: Monday, September 21, 2015 2:17 PM
To: Birgfeld, Erin; Valentine, Julia
Subject: FW: Volkswagen

Can Chris do this around 3:45?

-----Original Message-----
From: Stromberg, Stephen [mailto:Stephen.Stromberg@washpost.com]
Sent: Monday, September 21, 2015 2:04 PM
To: Purchia, Liz
Subject: Volkswagen

Hi Liz,

I'm writing about Volkswagen today.How did the EPA not catch this earlier? Can/should inspections change?

Thanks.

Best,
Steve

Stephen Stromberg
Office: 202.334.6370
Cell: **Ex. 6**

From: Kaul, Meetu
Required Attendees: Orehowsky, Gregory; Van Eaton, Josh (ENRD); Engel, Bethany
[redacted] **Non-Responsive** e
234567
Importance: Normal
Subject: VW - Call with Ex. 5
Start Date/Time: Tue 9/22/2015 1:00:00 PM
End Date/Time: Tue 9/22/2015 1:30:00 PM

From: Kaul, Meetu
Required Attendees: Orehowsky, Gregory; Van Eaton, Josh (ENRD); Engel, Bethany (ENRD); Ex. 4 - CBI
Location: Conference line Non-Responsive conference code Non-Responsive participant code Non-Responsive
Importance: Normal
Subject: VW - Call with Ex. 4 - CBI
Start Date/Time: Tue 9/22/2015 1:00:00 PM
End Date/Time: Tue 9/22/2015 1:30:00 PM

From: Ex. 7
Location: Conference line Non-Responsive
Non-Responsive
Importance: Normal
Subject: Accepted: VW - Call with Anne Wick
Start Date/Time: Tue 9/22/2015 1:00:00 PM
End Date/Time: Tue 9/22/2015 1:30:00 PM

From: Ex. 7
Location: Conference line Non-Responsive
Importance: Normal
Subject: Accepted: VW - Call with Anne Wick
Start Date/Time: Tue 9/22/2015 1:00:00 PM
End Date/Time: Tue 9/22/2015 1:30:00 PM

;

From: Orehowsky, Gregory
Location: Conference line 1
Importance: Normal
Subject: Accepted: VW - Call with Anne Wick
Start Date/Time: Tue 9/22/2015 1:00:00 PM
End Date/Time: Tue 9/22/2015 1:30:00 PM

Non-Responsive

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Bunker, Byron[bunker.byron@epa.gov]
From: Birgfeld, Erin
Sent: Mon 9/21/2015 6:45:07 PM
Subject: FW: Volkswagen - Prep for WaPo call at 3:45

Hi Chris,

You are on for 3:45 with WaPo. Ex. 5 Ex. 5

H Ex. 5 some
r

As described in the NOV, a sophisticated software algorithm on certain Volkswagen vehicles detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test. The effectiveness of these vehicles pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a defeat device, as defined by the Clean Air Act.

Making sure automakers comply with Clean Air Act vehicle emissions standards is paramount to ensuring clean air and adequate public health protections as well as to create a level playing field so companies that follow the law don t have to compete with those that break it. This case demonstrates the need for strong federal and state programs to enforce the laws that keep our air clean and safe to breathe. Enforcement is part of any good program.

Can/should inspections change?

CARB and EPA have begun procuring in-use diesel vehicles produced by other manufacturers to screen the vehicles for possible defeat devices. Moving forward we will be reviewing our compliance protocols and introducing ways in which we can effectively test not only for emissions performance but also for the potential presence of defeat devices.

Ex. 5

-----Original Message-----
From: Purchia, Liz
Sent: Monday, September 21, 2015 2:19 PM
To: Birgfeld, Erin; Valentine, Julia
Subject: RE: Volkswagen

Ok thanks

-----Original Message-----
From: Birgfeld, Erin
Sent: Monday, September 21, 2015 2:18 PM
To: Purchia, Liz; Valentine, Julia
Subject: RE: Volkswagen

Yes. I'll schedule it.

-----Original Message-----
From: Purchia, Liz
Sent: Monday, September 21, 2015 2:17 PM
To: Birgfeld, Erin; Valentine, Julia
Subject: FW: Volkswagen

Can Chris do this around 3:45?

-----Original Message-----
From: Stromberg, Stephen [mailto:Stephen.Stromberg@washpost.com]
Sent: Monday, September 21, 2015 2:04 PM
To: Purchia, Liz
Subject: Volkswagen

Hi Liz,

I'm writing about Volkswagen today.How did the EPA not catch this earlier? Can/should inspections change?

Thanks.

Best,
Steve

Stephen Stromberg
Office: 202.334.6370
Cell: 310.770.6646

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Birgfeld, Erin
Sent: Mon 9/21/2015 6:55:13 PM
Subject: FW: Great makeup !

FYI -

-----Original Message-----
From: Shepardson, David [mailto:DShepardson@detroitnews.com]
Sent: Monday, September 21, 2015 2:54 PM
To: Birgfeld, Erin
Subject: Re: Great makeup !

Also looking for guidance on this
http://www.bloomberg.com/news/articles/2015-09-21/volkswagen-said-to-be-target-of-u-s-criminal-probe-on-emissions

Sent from my iPhone

> On Sep 21, 2015, at 1:17 PM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:
>
> Searching...
>
>
> -----Original Message-----
> From: Shepardson, David [mailto:DShepardson@detroitnews.com]
> Sent: Monday, September 21, 2015 12:30 PM
> To: Birgfeld, Erin
> Subject: Re: Great makeup !
>
> Hey do you know where link is to December VW recall?
>
> Sent from my iPhone
>
>> On Sep 21, 2015, at 11:35 AM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:
>>
>> I agree! Thanks for sending.
>>
>> -----Original Message-----
>> From: Shepardson, David [mailto:DShepardson@detroitnews.com]
>> Sent: Monday, September 21, 2015 11:04 AM
>> To: Birgfeld, Erin
>> Subject: Great makeup !
>>
>>
>>

To: Ex. 6
From: Kaul, Meetu
Sent: Mon 9/21/2015 6:57:07 PM
Subject: RE: A ? For u as what to do

Hello,

Thank you for your email. The EPA is currently investigating this matter, including what an appropriate remedy may be for alleged violations. I don t have any further information on potential remedies at this time. However, EPA enforcement case resolutions generally do not include any kind of compensation for customers as may be available with private lawsuits like class actions.

Sorry I don t have more information for you. The information we do have can be found at:

http://www3.epa.gov/otaq/cert/violations.htm

Regards,
Meetu Kaul

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Ex. 6
Sent: Sunday, September 20, 2015 11:31 PM
To: Kaul, Meetu
Subject: A ? For u as what to do

So I was one the many who researched and thought about it - and decided on Clean Diesel. I owned 2 Audi diesels. The Q7 (that we just got rid of) and the A3 that we still have/own. We get sometimes 42mpg on it. I occasionally wondered how the Q7 required the adblue and the A3 didn't. If you could get a diesel to pass inspections without the adblue why bother making a car that requires it? Now the truth is out and a recall initiated. A diesel engine without the adblue is a scam and they lied.

So now the A3 I paid off and was planning driving into the ground with it's good performance, excellent gas mileage and "green emissions" is worthless. No resale value whatsoever.

What kind of fix can they make anyway on recall? If the engine could perform under code they would have allowed it. The one possible fix to keep emissions down will be to reduce the engine performance (probably to unrealistic driving levels).

So I know a few smart people and will pose the question - what are they going to do?
What can I do?

The Huffington post says call and ask for a loaner now. Is that realistic? How hard should we - could we push on that call?

Is Vw/audi going to have to give refunds on 480000 cars - there is no fix?
It's not a ignition thing or an airbag thing. It's not going to risk killing you in an instant. But they lied and there is no realistic fix.

I----that was a post I made - i am curious as to what you would say

Thank u

Ex. 6

Sent from my iPhone

To: Ex. 6
From: Kaul, Meetu
Sent: Mon 9/21/2015 6:58:08 PM
Subject: RE: 2009 Jetta TDI - NOV

Sorry, forgot to mention that the information that I do have can be found at:

http://www3.epa.gov/otaq/cert/violations.htm

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Kaul, Meetu
Sent: Monday, September 21, 2015 1:42 PM
To: 'Vale Ostrovkin'
Subject: RE: 2009 Jetta TDI - NOV

Hello,

Thank you for your email. The EPA is currently investigating this matter, including what an appropriate remedy may be for alleged violations. I don't have any further information on potential remedies at this time. However, EPA enforcement case resolutions generally do not include any kind of compensation for customers as may be available with private lawsuits like class actions.

Sorry I don't have more information for you.

Regards,

Meetu Kaul

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Vale Ostrovkin **Ex. 6**
Sent: Monday, September 21, 2015 2:54 AM
To: Kaul, Meetu
Subject: 2009 Jetta TDI - NOV

Hello,

I live in Washington state, currently drive a 2009 Jetta TDI and my tabs will expire soon. Due to the defeat device, I won't be able to renew my tabs, and might have to purchase a new car in order to drive to work and school. Is there any action that diesel owners affected by this like myself are able to take? I bought my car used with an expensive warranty at a volkswagan dealership because I care about my own carbon footprint and I hoped to lower emissions (which

didn't happen....).
The ideal solution would be a refund from VW for the car and warranty so I can buy something like a volt or prius but I wanted to ask you what would or could happen. I apologize if I'm being confusing in what I'm asking.

Thanks,
Valensce Ostrovkin

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Purchia, Liz[Purchia.Liz@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Valentine, Julia[Valentine.Julia@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]
Cc: Bunker, Byron[bunker.byron@epa.gov]
From: Senn, John
Sent: Mon 9/21/2015 7:01:30 PM
Subject: RE: Bloomberg reporting on Criminal investigation on VW

Ex. 5

-----Original Message-----
From: Birgfeld, Erin
Sent: Monday, September 21, 2015 2:58 PM
To: Purchia, Liz; Grundler, Christopher; Valentine, Julia; Senn, John; Conger, Nick
Cc: Bunker, Byron
Subject: Bloomberg reporting on Criminal investigation on VW
Importance: High

http://www.bloomberg.com/news/articles/2015-09-21/volkswagen-said-to-be-target-of-u-s-criminal-probe-on-emissions

The U.S. Justice Department is conducting a criminal investigation of Volkswagen AG s admission to cheating on federal air pollution tests, according to two U.S. officials familiar with the inquiry.
Volkswagen said last week it s cooperating with regulators probing gaps between emissions on the road and lab tests on some diesel models. The U.S. officials described the inquiry on condition of anonymity because it s a continuing investigation.
Volkswagen plunged as much as 23 percent Monday to 125.40 euros in Frankfurt, wiping out about 15.6 billion euros ($17.6 billion) in market value. The stock closed at 132.2 euros, its lowest in more than three years.

Justice Department spokesman Wyn Hornbuckle declined to comment.

To: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Mon 9/21/2015 7:01:33 PM
Subject: etron

Got ur vm but I'm leaving for Ex. 6 Being here sound slike a good idea. Arlene Smithson will call you today or Bill when they know what time tues.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Mon 9/21/2015 7:03:19 PM
Subject: RE: etron

Ok thanks. We will plan on being there then, and will wait to hear form Arlene on times.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, September 21, 2015 3:02 PM
To: Allen, Gregory (EEO) <Gregory.Allen@vw.com>
Subject: etron

Got ur vm but I'm leaving for Ex. 6 Being here sound slike a good idea. Arlene Smithson will call you today or Bill when they know what time tues

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Anne Wick
Location: Conference line Non-Responsive onference code Non-Responsive articipant code Non-Responsive
Importance: Normal
Subject: Accepted: VW - Call with Ex. 4 - CBI
Start Date/Time: Tue 9/22/2015 1:00:00 PM
End Date/Time: Tue 9/22/2015 1:30:00 PM

;

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Ex. 6
Sent: Mon 9/21/2015 7:19:48 PM
Subject: 2012 vw passat

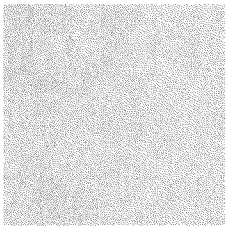
Hello Mr. Kaul,

I have read the notice the EPA sent to Volkswagen. I have a 2012 Passat diesel. I see that the notice contains a table that includes the 2012 and 2013 Passat vehicles as containing the offending AECD. However, the recall and other information contained online does not list 2012 and 2013 Passats, only the 2014 and 2015. Can you comment on why the 2012 and 2013 Passats are not included in the recall at this time when they contain the same AECD?

Thank you for your time,

Ex. 6

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Mon 9/21/2015 7:27:50 PM
Subject: Three current WSJ online stories on VW.
WSJ volkswagen-shares-tumble-as-emissio.pdf
WSY article epa-accuses-volkswagen-of-dodging-e.pdf
WSJ volkswagen-ceo-apologizes-after-epa.pdf



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Ex. 4 - CBI (Contractor)

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory Library

2000 Traverwood Drive

Ann Arbor, MI 48105

Ex. 4 - CBI

Ex. 4 - CBI

To: Shannon Baker-Branstetter[sbaker-branstetter@consumer.org]; ebloom@consumer.org[ebloom@consumer.org]
From: Bunker, Byron
Sent: Mon 9/21/2015 7:52:39 PM
Subject: EPA VW Notice

http://www3.epa.gov/otaq/cert/violations.htm

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 9/21/2015 7:57:28 PM
Subject: Volkswagen denied deception to EPA for nearly a year
MAIL_CONVERSATION_TOPIC: Volkswagen denied deception to EPA for nearly a year
Created: Fri 3/18/2016 6:18:22 PM

The company's stock plunged on Monday after disclosures that it had illegally installed software that misrepresented the level of pollutants certain models emitted.

View article...

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Mon 9/21/2015 7:59:52 PM
Subject: FW: 2012 vw passat

Can you respond?

Sorry to forward all these to you.

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Ex. 6
Sent: Monday, September 21, 2015 3:20 PM
To: Kaul, Meetu
Subject: 2012 vw passat

Hello Mr. Kaul,

I have read the notice the EPA sent to Volkswagen. I have a 2012 Passat diesel. I see that the notice contains a table that includes the 2012 and 2013 Passat vehicles as containing the offending AECD. However, the recall and other information contained online does not list 2012 and 2013 Passats, only the 2014 and 2015. Can you comment on why the 2012 and 2013 Passats are not included in the recall at this time when they contain the same AECD?

Thank you for your time,

Ex. 6

From: Ex. 7 @ARB
Location: Ex. 6
Importance: Normal
Subject: Declined: CARB VW next steps
Start Date/Time: Mon 9/21/2015 5:00:00 PM
End Date/Time: Mon 9/21/2015 6:00:00 PM

;
Sorry Byron Ex. 6 this am. In the office now.

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 9/21/2015 8:10:54 PM
Subject: P.M. NEWSCAST: VW facing U.S. criminal probe, report says | Apple car in 2019? | Caddy 'startup' appeal | Subaru plans U.S. plant expansion

September 21, 2015

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Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 9/21/2015 8:11:10 PM
Subject: P.M. NEWSCAST: VW facing U.S. criminal probe, report says | Apple car in 2019? | Caddy 'startup' appeal | Subaru plans U.S. plant expansion

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customerservice@autonews.com

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Mon 9/21/2015 8:28:06 PM
Subject: Feds open criminal probe of Volkswagen's emissions violations
MAIL_CONVERSATION_TOPIC: Feds open criminal probe of Volkswagen's emissions violations
Created: Fri 3/18/2016 6:18:22 PM

The U.S. Justice Department is conducting a criminal investigation of Volkswagen AG's admission to cheating on federal air pollution tests, according to two U.S. officials familiar with the inquiry.

View article...

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Mon 9/21/2015 8:31:04 PM
Subject: DAILY: Apple aims to 'ship' electric car in 2019, report says | VW diesel sales frozen in U.S. | VW faces U.S. criminal probe | Subaru's Ind. expansion plans | Mitsubishi preparing to close Ill. plant

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Apple aims to 'ship' electric car in 2019, report says

Silicon Valley technology giant Apple has set a goal of finalizing an electric car in 2019, The Wall Street Journal reported today. Apple has internally designated an electric car as a "committed project," the newspaper reported, citing people familiar with the matter.

VW's diesel sales frozen until compliance is proven, EPA official says

With its diesel car lineup grounded by an emissions-test cheating scandal, Volkswagen now bears the burden of proving that these vehicles comply with federal emissions standards, the EPA's top auto regulator said.

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The U.S. Justice Department is conducting a criminal investigation of Volkswagen AG's admission to cheating on federal air pollution tests, according to two U.S. officials familiar with the inquiry, Bloomberg reported.

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Subaru to expand capacity by 100,000 as Mitsubishi prepares to close Illinois plant says

Subaru, straining to meet record U.S. demand, will invest $140 million to expand annual production capacity by 100,000 vehicles at its sole U.S. plant.

Mitsubishi Motors has started preparing for the closure of its assembly plant in Illinois after failing to find a buyer for the high-cost auto factory, the Nikkei business daily reported.

UAW president sees FCA workers ratifying contract

VW diesel 'defeat device' scandal will test CEO

BLOG: **MIKE COLIAS**

How VW's 'clean diesel' made a liar out of me

BLOG: **ANDREW STOY**

Why VW's betrayal with diesel engines is different

THE VW DIESEL CRISIS

Curious clean-air group discovered VW emissions violations

VW shares plunge 20% on emissions scandal; U.S. widens probe

VW orders probe into breach of U.S. emissions rules

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2 senior VW executives to skip Passat event

BMW, Daimler say their diesels comply with U.S. clean air rules

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VW faces legal fallout from cheating -- this time in Germany

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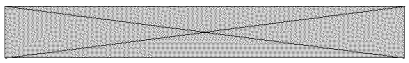

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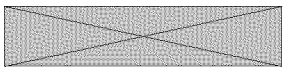
» Sept. 23 at 11am ET - Connected Vehicle Data
by IBM

» Sept. 30 at 2pm ET - Mobile Payment
by DMEautomotive

» Oct. 7 at 2pm ET - Programmatic
by Rocket Fuel



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To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Mon 9/21/2015 8:31:25 PM
Subject: DAILY: Apple aims to 'ship' electric car in 2019, report says | VW diesel sales frozen in U.S. | VW faces U.S. criminal probe | Subaru's Ind. expansion plans | Mitsubishi preparing to close Ill. plant

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September 21, 2015

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UAW, FCA pact ties worker bonus to long-term goals

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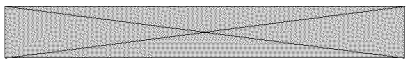

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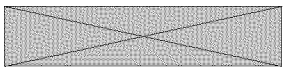

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To: Kaul, Meetu[Meetu.Kaul@APORTER.COM]; Belser, Evan[Belser.Evan@epa.gov]
Cc: Engel, Bethany (ENRD)[Bethany.Engel@usdoj.gov]
From: Van Eaton, Josh (ENRD)
Sent: Mon 9/21/2015 9:05:43 PM
Subject: CARB update

Meetu & Evan-

Whenever you finish with CARB, we are looking forward to following up with you on possible travel for this week to OTAQ and whether travel to CARB next week looks likely. Also can download our call with VW counsel **Ex. 7**

Joshua H. Van Eaton

Trial Attorney

U.S. Department of Justice

Environment and Natural Resources Division

Environmental Enforcement Section

P.O. Box 7611

Washington, DC 20044-7611

p:202.514-5474

f: 202.514-0097

josh.van.eaton@usdoj.gov

Overnight:

601 D. Street, N.W. (Rm. 6423)

Washington, DC 20004

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Non-Responsive
Sent: Mon 9/21/2015 9:09:55 PM
Subject: VW Diesel

Thank you for bringing this problem to light.

I've got two new VW TDIs that I bought because they were "clean" vehicles. One 2 years old, one a few months old. My lung health has clearly deteriorated since I've been driving the 2013 TDI. I've got doctor's records to substantiate that. I thought it was a coincidence, but maybe not.

If I can be of help to you, let me know. I'd be happy to.

If I want to return the cars to VW and be made whole, both in terms of money spent for the cars and my health issues (assuming that link can be convincingly shown), will your agency protect my rights, or should I "sue" VW, or what?

Thanks again.

Non-Responsive

To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
From: Senn, John
Sent: Mon 9/21/2015 9:18:39 PM
Subject: My cell for this week

Hey team—I wanted to give you all my work cell since folks will be in & out of the office the rest of the week (myself included—I plan to be here tomorrow & teleworking Wednesday and Thursday)—it's 202-594-6081.

Feel free to call me if you need to re media calls or other VW matters you want to chat about.

Thanks,

John

John Senn

Acting Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

(202) 564-8996 - senn.john@epa.gov

https://twitter.com/EPAJustice

To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Cohen, Janet
Sent: Mon 9/21/2015 9:19:01 PM
Subject: Re: answer to WaPo interview questions about recall

We have a few quarters of reporting. Joel looked up the numbers. Will forward. - J. -

On Sep 21, 2015, at 5:17 PM, Bunker, Byron <bunker.byron@epa.gov> wrote:

> These are the covered numbers. We should have at least one and perhaps two quarters of reporting. I don't know if the team has been able to pull those numbers yet.
>
> Janet – can you follow up on this tomorrow?
>
> Thanks,
>
> Byron
>
> **********
>
> Byron Bunker
>
> Director Compliance Division
>
> Office of Transportation and Air Quality
>
> Environmental Protection Agency
>
> 2000 Traverwood Drive
>
> Ann Arbor, MI 48105
>
> Bunker.Byron@epa.gov
>
> Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Grundler, Christopher
Sent: Monday, September 21, 2015 5:10 PM
To: Birgfeld, Erin
Cc: Bunker, Byron
Subject: Re: answer to WaPo interview questions about recall

Byron-- do these numbers reflect the vehicles covered or that actually came in and were "fixed"?

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 4:56 PM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:

Chris,

This is our answer for the WaPo follow up. I think you wanted to review this one.

How many vehicles were recalled in Dec. 2014?

The December 2014 recall covered approximately 91,500 vehicles. This is only a subset of the VW diesels with the defeat device. There was another recall in April,

2015 that covered another 300,000 vehicles. The 2015 model year VW Passats that are part of the NOV were not covered by either of these recalls.

OK to send?

From: Birgfeld, Erin
Sent: Monday, September 21, 2015 4:35 PM
To: Cohen, Janet
Cc: Bunker, Byron; Ball, Joel; Snyder, Jim; Wehrly, Linc
Subject: Re: answer to WaPo questions about recall - incorporates Byron's comments (same as answer sent before)

Ok so this answer is good to go?

Sent from my iPhone

On Sep 21, 2015, at 4:28 PM, Cohen, Janet <cohen.janet@epa.gov> wrote:

> This is Byron from Janet's computer. I misread her note to say that Passats weren't recalled. The 2013-2014 Passats were covered by the December recall. It is only the 2015s that have not been recalled. Sorry I didn't read the note more carefully.

> **From:** Bunker, Byron
> **Sent:** Monday, September 21, 2015 4:25 PM
> **To:** Cohen, Janet; Birgfeld, Erin
> **Cc:** Ball, Joel; Snyder, Jim; Wehrly, Linc
> **Subject:** RE: answer to WaPo questions about recall - incorporates Byron's comments (same as answer sent before)
> **Importance:** High
>
> Please hold this response. The VW Passat was covered by a Dec 2014 recall.

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Cohen, Janet
Sent: Monday, September 21, 2015 4:22 PM
To: Birgfeld, Erin
Cc: Bunker, Byron; Ball, Joel; Snyder, Jim; Wehrly, Linc
Subject: answer to WaPo questions about recall - incorporates Byron's comments (same as answer sent before)

WaPo

– How many vehicles were recalled in Dec. 2014? The December 2014 recall covered about 91,500 vehicles (91539 to be exact). This is only a subset of the VW diesels with the defeat device. There was another recall in April, 2015 that covered about 300,000 vehicles (299, 759). The 2015 Passats were not covered by either of these recalls (~90,000 vehicles)

To: Bunker, Byron[bunker.byron@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Cohen, Janet
Sent: Mon 9/21/2015 9:21:20 PM
Subject: Fwd: VW Recalls

Joel has numbers covering 3 qs of reporting in email below. - J. -

Begin forwarded message:

From: "Ball, Joel" <ball.joel@epa.gov>
Date: September 21, 2015 at 2:37:05 PM EDT
To: "Snyder, Jim" <Snyder.Jim@epa.gov>, "Bunker, Byron" <bunker.byron@epa.gov>, "Wehrly, Linc" <wehrly.linc@epa.gov>, "Cohen, Janet" <cohen.janet@epa.gov>
Subject: VW Recalls

Hi Byron,

We no long post recall information on our websites. I have attached the two recall reports VW submitted. #009 is for the Gen 2 and I believe 0012 covers the gen 1off cycle issue but it is difficult to determine from there description.

There have been 3 quarters of reporting completed as of Aug 19 for the Gen 2 recall (009) which has captured 68927 vehicles out of 91539 or 75%

There has been 1 quarter of reporting completed as of Aug 19 for the gen 1 recall (0012) which has captured 127242 vehicles out of 299759 or 43 %.

Joel Ball
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4238
ball.joel@epa.gov

<VERR VW-0012.pdf>

<VERR VW-009.pdf>

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Non-Responsive
Sent: Mon 9/21/2015 9:39:40 PM
Subject: Fwd: Now what

My 2012 VW Jetta is scheduled to be renewed by October 2015
If it does not legitimately pass the smog test, what recourse do I have since it is my only vehicle?
Thank you.

Non-Responsive

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: EnergyGuardian
Sent: Mon 9/21/2015 9:39:48 PM
Subject: With UN talks approaching, greens start push for stronger climate deal

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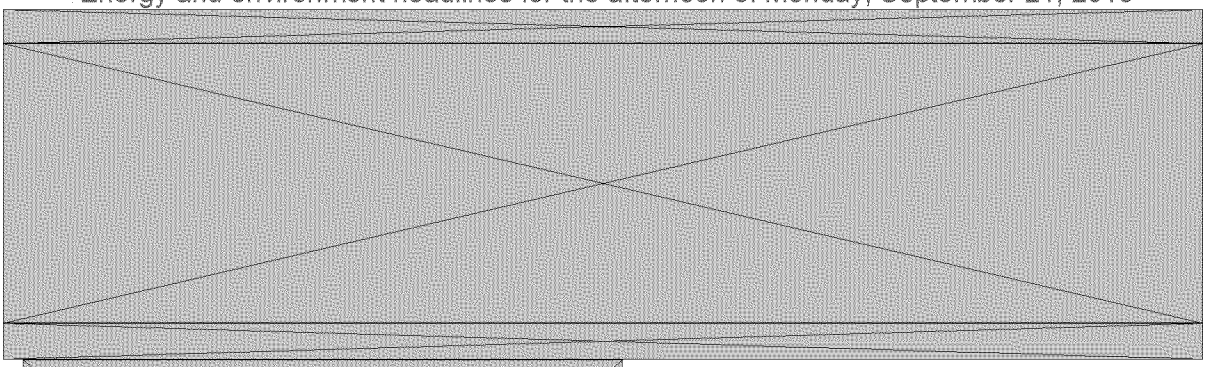
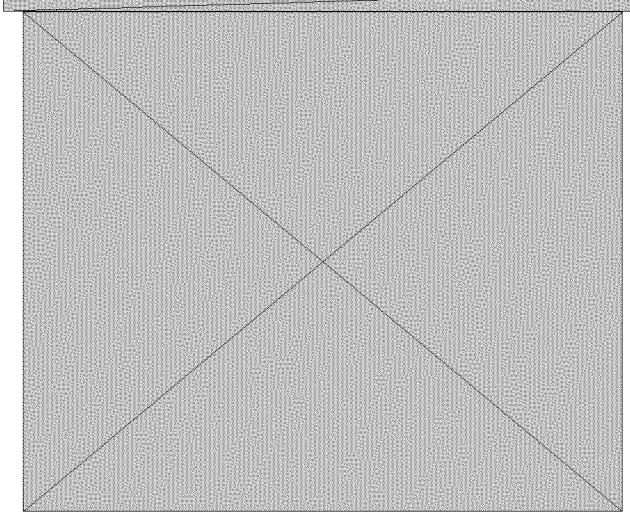
Energy and environment headlines for the afternoon of Monday, September 21, 2015





With UN talks approaching, greens start push for stronger climate deal

By Kevin Rogers

As world leaders prepare to negotiate an agreement in December to slash carbon emissions enough to avert the worst consequences of climate change, environmentalists and their allies are looking to build pressure for a stronger deal than the one taking shape.

Greenpeace on Monday called for investment of about 2 percent of the world's economy in a program to eliminate the use of all fossil fuels by 2050.

Leaders of the People's Climate Movement, a coalition of U.S. environmental, social justice and labor groups, teased plans for a multi-city rally on October 14 aimed at generating pressure for a strong deal in Paris.

Both groups contend that the United Nations talks in Paris would have to result in a strong deal if the world is keep the average rise in global temperatures below 2 degrees Celsius by 2050 — the point where many scientists say the worst impacts of climate change would become irreversible.

In a visible sign of support for the goal, some actors at the Emmy Awards in California Sunday night wore green ribbons containing the hashtag #DemandClimateAction.

The Greenpeace report, which the group publishes annually and was conducted with the help of Germany's aerospace agency, touted rapid growth in the renewable energy sector and declining coal use as causes for optimism — but insufficient to save the planet.

"If global mitigation efforts are strengthened, this trend will continue," the report said. "But the transition to renewables needs to happen more quickly if it is to keep pace with the growth in energy demand and the necessary replacement of fossil fuel-based energy supply."

Noting that fossil fuel still generates 81.2 percent of global energy supplies, the group estimates the move to decarbonize would require $64.6 trillion in new renewable transmission investment, a sum it said would be recovered through savings in fuel costs. That averages to $1.6 trillion per year through 2050. The World Bank said that, in 2014, the world's total economic output was $77.9 trillion, and the United Nations Environment Program estimates that total global renewable investment was $270 billion.

Greenpeace also said the Paris deal must include legally binding carbon reductions, reform of subsidy systems to favor renewables, and reforestation.

"What is required is for the political will to be there," the report said.

Chris Warren, a spokesman for the Institute for Energy Research, a free-market think tank, said the report was "same old, same old." He also said the report's call to end nuclear energy indicated that Greenpeace was more focused with slashing energy use than it was in cutting carbon.

"They're citing CO2 emissions as their reasoning behind this, but they go after nuclear as well. They want to do away with nuclear, which emits no CO2," he said. "I think that really shows what this is all about. It's about forcing people to use less energy."

Greenpeace argues that nuclear power is unsafe and, unlike renewable sources such as solar and wind, produces waste that poses an environmental threat.

Environmentalists are also looking to generate grassroots momentum for a strong climate

deal. The People's Climate Movement on October 14 plans to hold rallies in New York City, Chicago, Miami and other large cities, hoping to expand on last year's program, which drew an estimated 400,000 activists to New York.

On a call with reporters, organizers pledged that the rallies would aim to elevate environmental justice as an impetus for action, putting focus on the effects of climate change on minority, indigenous and working-class communities. They pledged to push the Obama administration to go further with its carbon reduction plans.

"This is a life-and-death issue for many of our people. We should not be in a situation where we're forced to adapt to a changing climate," Indigenous Environmental Network Executive Director Tom Goldtooth said. "We need to take action. The target reduction that the administration is taking to Paris won't get us to where we need to go."

The administration has pledged to cut carbon emissions by between 26 and 28 percent by 2025, compared with a 2005 baseline. Goldtooth did not specify what he thinks the target should be.

Kaydrianne Young, an organizer for the New Florida Majority, said the challenge would be to keep up the pressure on climate action once the rallies end.

"Environmentalism is not a special interest," she said. "We don't want to come together for this big, beautiful action on October 14, and just walk away."

Warren said HR would look to counter the groups' messages in the lead-up to Paris, rallying free market groups and activists to tout traditional energy sources as a path to expanded economic opportunity.

"Access to affordable energy and reliable energy is what makes modern life possible," he said. "It's really what brought us out of the dark ages, and you have groups like Greenpeace and these other environmental lobbying groups who are pushing for us to use less of these reliable energy sources, and the results won't be good."

Quick Links

Colorado's high court to decide if cities can ban fracking

Feds plan Tuesday announcement on protections for imperiled sage grouse

Investigation opens in deaths of 25 walrus on Alaska beach

VW rocked by emissions scandal as prosecutors come calling

Study: Twice as much trash put in landfills than estimated

Iranians collect samples, IAEA says that's OK

Britain to guarantee Chinese investment in new nuclear plant

OMB giving natural gas waste rule final review

Financial analyst predicts renewed gas boom in future

Arctic drilling: Hilcorp plan for Beaufort island under review

Stars wear green climate ribbons at Emmys

More companies pricing carbon emissions: CDP

Carbon schemes growing, but pricing too low: World Bank

Oil jumps on expectations of production cuts

Apple aims for electric cars by 2019

Wind power faces multiple challenges in Pennsylvania

Brazil prosecutor traces Petrobras corruption back to Lula aide

Upcoming Events

Colorado's high court to decide if cities can ban fracking

By Dan Elliott

DENVER (AP) — The Colorado Supreme Court agreed Monday to decide whether cities can ban hydraulic fracturing, stepping into a high-stakes battle over whether local governments can impose tougher oil and gas rules than the state.

The court will hear cases from Longmont, where voters banned hydraulic fracturing in 2012, and Fort Collins, where voters approved a 5-year moratorium in 2013.

The Colorado Oil and Gas Association sued the two cities, and lower courts overturned the local restrictions, saying regulation is the state's prerogative. The cities and several environmental groups appealed.

Hydraulic fracturing, or fracking, injects a high-pressure mix of water, sand and chemicals underground to crack open formations and make it easier to recover oil and gas. It's a widespread practice that led to an energy boom in Colorado, the nation's No. 7 energy-producing state, and elsewhere.

More

Feds plan Tuesday announcement on protections for imperiled sage grouse

DENVER (AP) — U.S. officials plan to make a major announcement Tuesday on efforts to protect an imperiled bird that could have implications for the energy and ranching industries.

The Interior Department says governors of Colorado, Montana, Nevada and Wyoming are among those who plan to join Secretary Sally Jewell and other federal officials for the announcement about greater sage grouse at the Rocky Mountain Arsenal National Wildlife Refuge outside Denver.

The government faces a Sept. 30 court-imposed deadline to decide whether it should list the chicken-sized birds as a threatened or endangered species.

Greater sage grouse range from California to the Dakotas. They've dwindled from millions to no more than 500,000 amid loss of their sagebrush habitat.

More

Investigation opens in deaths of 25 walrus on Alaska beach

By Dan Joling

ANCHORAGE, Alaska (AP) — The federal government has opened a criminal investigation into the death of 25 Pacific walrus found on an isolated northwest Alaska beach.

U.S. Fish and Wildlife Service spokeswoman Crystal Leonetti says agency investigators have not returned from the site at Cape Lisburne but that the case is now in the hands of the U.S. Attorney's office.

Initial reports last week said the walrus had been shot but the Fish and Wildlife Service refused to speculate on the cause of death until agency personnel had examined the carcasses.

A person connected to an Air Force radar station at Cape Lisburne spotted the animals and notified the agency Wednesday.

More

VW rocked by emissions scandal as prosecutors come calling

By Frank Jordans and Pan Pylas

BERLIN (AP) — Volkswagen's chief executive was under withering pressure Monday as an emissions-testing scandal erased more than 13 billion euros (around $15 billion) from the company's market value in a single trading session.

The stock plunge followed revelations that the German carmaker had rigged U.S. emissions tests for nearly 500,000 diesel cars. VW CEO Martin Winterkorn apologized, acknowledging that his company had "broken the trust of our customers and the public."

Investors considering the financial and reputational implications of the scandal on the world's top-selling carmaker dumped VW stock Monday, driving the company's share price down a stunning 17.1 percent in the first trading since the U.S. Environmental Protection Agency announced the violations. VW shares closed at a nearly three-year low of 133.70 euros.

VW, facing as much as $18 billion in fines, has halted U.S. sales of the affected vehicles and pledged to cooperate with regulators.

More

Study: Twice as much trash put in landfills than estimated

By Seth Borenstein

WASHINGTON (AP) — Americans are sending more than twice as much trash to landfills as the federal government has estimated, according to a new study.

It turns out that on average America tosses five pounds of trash per person per day into its landfills, according to an analysis of figures from the same study, which is based on actual landfill measurements instead of government estimates.

For years, the U.S. Environmental Protection Agency relied on estimates to determine how much trash was being sent to landfills. But in 2010, the agency required most municipal landfills to measure and report how much trash was heading into the dumps, as part of an effort to lower heat-trapping methane emissions. Researchers at Yale University looked at the records for more than 1,200 landfills and calculated amounts, predominantly based on weights.

They figured it was 289 million tons in 2012, according to a study published Monday in the journal Nature Climate Change. For the same year, EPA estimated the figure to be 135 million tons.

More

A message from America's Natural Gas Alliance

Clean is Powerful. Natural gas helps Georgia Power's plant generate electricity with 50% fewer emissions. Think about it.

Learn more at www.thinkaboutit.org.

Iranians collect samples, IAEA says that's OK

VIENNA (AP) — The chief of the U.N. nuclear agency acknowledged Monday that samples used to determine whether Iran tried to develop a nuclear weapon were collected by the Iranians instead of agency experts, but insisted the probe stands up to strict agency standards.

Such sampling of soil, air or dust from equipment is usually done by the International Atomic Energy Agency's own experts. But IAEA chief Yukiya Amano confirmed that Iranians carried out that part of the probe at Parchin, where the agency suspects that explosive triggers for nuclear weapons might have been tested in the past.

Diplomats say Iran insisted on the compromise as a condition for any probe of Parchin.

Deputy IAEA Director General Tero Varjoranta said that there have been more than 40 instances of letting a country being inspected use their own nationals to do the sampling and that the process is only a small part of a rigid regimen established by the agency to make sure there is no cheating.

More

Britain to guarantee Chinese investment in new nuclear plant

By The Associated Press

LONDON (AP) — The British government said Monday it will underwrite $3.1 billion (2 billion pounds) in Chinese financing for a new nuclear power plant in southwest England, as it encourages major Chinese investment in the U.K. nuclear sector.

Sponsored Links

Treasury chief George Osborne, on a trip to China, said Britain would underwrite China's stake in the Hinckley Point power station. He said the deal "opens the door to majority Chinese ownership of a subsequent nuclear project" planned for England's southeast.

British officials hope Monday's announcement will encourage France's EDF Energy — which is backed in the project by China General Nuclear Corporation and China National Nuclear Corporation — to make a final decision this year to build Britain's first new nuclear power station in two decades.

The plant, which had been due to start producing electricity in 2023, has been mired in delays, and critics say it is uneconomical. Britain has agreed to grant operators a fixed above-market electricity price for 35 years to ensure their investment will break even.

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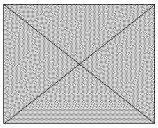

Week in Review – House Panel Moves To Lift Export Ban

Congress Gears up for Papal Visit.

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OMB giving natural gas waste rule final review

The Bureau of Land Management's proposed rule regulating venting and flaring of natural gas at drilling operations on federal land is undergoing its final review at the White House Office of Management and Budget, The Hill reports.

More

Financial analyst predicts renewed gas boom in future

One major financial analyst says natural gas, which is holding its own but not growing robustly this year, is on track for a renewed boom in 2017-18, FuelFix reports.

More

Arctic drilling: Hilcorp plan for Beaufort island under review

The Bureau of Ocean Energy Management is taking public comment on Hilcorp Energy Co.'s proposal to build a gravel island in the Beaufort Sea as part of its plan to drill for oil

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there, FuelFix reports.

More

Stars wear green climate ribbons at Emmys

Green ribbons worn by a number of stars at the Emmys Sunday—bearing the legend #DemandClimateAction—were distributed on behalf of the Natural Resources Defense Council, which said the idea was to build support for action at the Paris climate conference in December, E! Online reports.

More

More companies pricing carbon emissions: CDP

CDP—a non-profit based in Britain that tracks corporations' greenhouse gas emissions—is reporting that the number of large companies doing internal pricing of carbon emissions has jumped to 437, E&E reports.

More

Carbon schemes growing, but pricing too low: World Bank

The World Bank says there are 38 carbon pricing systems in operation globally—up from 20 in 2012—but the prices in them are so low that they aren't doing enough to reduce global warming, Reuters reports.

More

Oil jumps on expectations of production cuts

A report that low prices are jeopardizing the future of drilling projects helped boost oil markets Monday. U.S benchmark crude zoomed up $2, or 4.5 percent, to $46.68 a barrel on the Nymex, while in London, Brent gained $1.45 to $48.92, Marketwatch reports.

More

Apple aims for electric cars by 2019

Apple hopes to build and ship electric cars by 2019, sources have told The Wall Street Journal.

More

Wind power faces multiple challenges in Pennsylvania

If wind power is to play a role in helping Pennsylvania meet obligations under the Environmental Protection Agency's Clean Power Plan, the state will have to tackle a number

of obstacles including sorting out energy tax credits and credit trading rules, the Pittsburgh Tribune-Review reports.

More

Brazil prosecutor traces Petrobras corruption back to Lula aide

A prosecutor is alleging that the Petrobras corruption scandal was born in the office of Jose Dirceu, the chief of staff for then-president Luiz Inacio Lula da Silva from 2003 to 2005, Reuters reports.

More

Upcoming Events

- Sep. 22, Washington: Resources for the Future to hold a forum to examine the potential impact of carbon pricing, through taxes or credits, on low-income households and communities. 12:30 pm , 1616 P St. NW.
- Sep. 22, Commerce City, Colorado: Interior Secretary Sally Jewell to join federal officials and Govs., John Hickenlooper, Colo., Matt Mead, Wyo., Steve Bullock, Mont., and Brian Sandoval, Nev., to make an announcement regarding the greater sage-grouse. Dial in: 1-888-391-6809. Passcode: INTERIOR. 12:00 pm , Rocky Mountain Arsenal National Wildlife Refuge Visitor Center 6550 Gateway Road Commerce City, CO 80022
- Sep. 22, Washington: ClearView Energy Partners Managing Director to speak at the American Gas Association's Natural Gas Roundtable. 12:00 pm , University Club, 1135 16th Street, NW.
- Sep. 22, Washington: The United States Energy Association to hold a forum on the state of the global liquefied natural gas exports and the role the U.S. can play. Christopher Goncalves, managing director and co-chair of BRG's Energy and Natural Resources Practice, to speak. 10:30 am , 1300 Pennsylvania Avenue, NW.

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Karp, Gregory P.[gkarp@chicagotribune.com]
From: Yerak, Becky
Sent: Mon 9/21/2015 9:39:57 PM
Subject: Volkswagen discrepancy

Hi Kaul:

The EPA news release and letter of violation don't match on which VW models are affected.

Am I reading the letter wrong?

News release:

http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/dfc8e33b5ab162b985257ec400

Notice of violation:

http://www3.epa.gov/otaq/cert/documents/vw-nov-caa-09-18-15.pdf

For example, the chart in the letter does not list 2009 Beetle, Audi A3 or Golf, as the news release does.

However, the letter lists the 2012 Passat, but the news release does not.

Can you explain the discrepancies?

Becky Yerak

Note: new work email address as of 8/29/14: byerak@**chicago**tribune.com

becky.yerak@gmail.com

Business reporter

Chicago Tribune

435 N. Michigan Ave.

Chicago, IL 60611

Live: Work phone: 1-312-222-**4283** Cell**:** 1-312-823-7514 **Home phone**: 1-312-337-0519

Slightly disembodied:

LinkedIn Twitter Google Plus Facebook Page Pinterest

Blog: ChiFinance

Leo

My daily horoscope:

via Yahoo! Shine

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: EnergyGuardian
Sent: Mon 9/21/2015 9:40:03 PM
Subject: With UN talks approaching, greens start push for stronger climate deal

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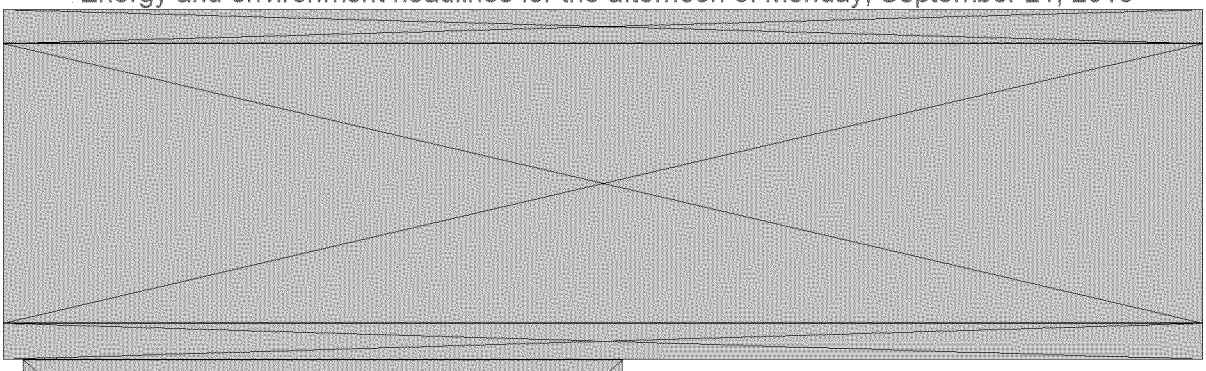
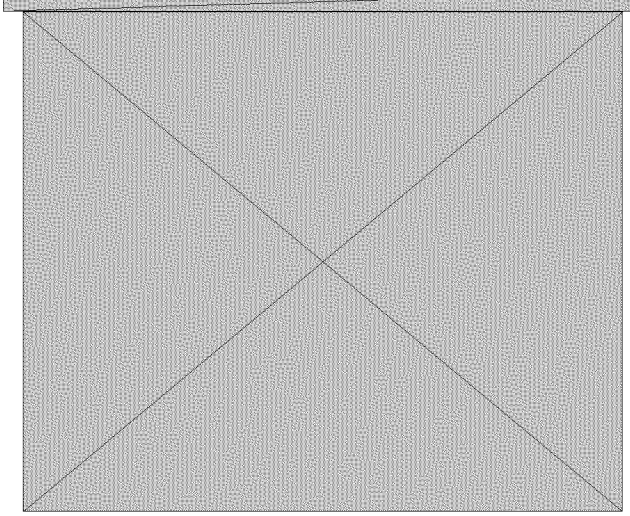
Energy and environment headlines for the afternoon of Monday, September 21, 2015





With UN talks approaching, greens start push for stronger climate deal

By Kevin Rogers

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Noting that fossil fuel still generates 81.2 percent of global energy supplies, the group estimates the move to decarbonize would require $64.6 trillion in new renewable transmission investment, a sum it said would be recovered through savings in fuel costs. That averages to $1.6 trillion per year through 2050. The World Bank said that, in 2014, the world's total economic output was $77.9 trillion, and the United Nations Environment Program estimates that total global renewable investment was $270 billion.

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"What is required is for the political will to be there," the report said.

Chris Warren, a spokesman for the Institute for Energy Research, a free-market think tank, said the report was "same old, same old." He also said the report's call to end nuclear energy indicated that Greenpeace was more focused with slashing energy use than it was in cutting carbon.

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The administration has pledged to cut carbon emissions by between 26 and 28 percent by 2025, compared with a 2005 baseline. Goldtooth did not specify what he thinks the target should be.

Kaydrianne Young, an organizer for the New Florida Majority, said the challenge would be to keep up the pressure on climate action once the rallies end.

"Environmentalism is not a special interest," she said. "We don't want to come together for this big, beautiful action on October 14, and just walk away."

Warren said HR would look to counter the groups' messages in the lead-up to Paris, rallying free market groups and activists to tout traditional energy sources as a path to expanded economic opportunity.

"Access to affordable energy and reliable energy is what makes modern life possible," he said. "It's really what brought us out of the dark ages, and you have groups like Greenpeace and these other environmental lobbying groups who are pushing for us to use less of these reliable energy sources, and the results won't be good."

Quick Links

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Oil jumps on expectations of production cuts

Apple aims for electric cars by 2019

Wind power faces multiple challenges in Pennsylvania

Brazil prosecutor traces Petrobras corruption back to Lula aide

Upcoming Events

Colorado's high court to decide if cities can ban fracking

By Dan Elliott

DENVER (AP) — The Colorado Supreme Court agreed Monday to decide whether cities can ban hydraulic fracturing, stepping into a high-stakes battle over whether local governments can impose tougher oil and gas rules than the state.

The court will hear cases from Longmont, where voters banned hydraulic fracturing in 2012, and Fort Collins, where voters approved a 5-year moratorium in 2013.

The Colorado Oil and Gas Association sued the two cities, and lower courts overturned the local restrictions, saying regulation is the state's prerogative. The cities and several environmental groups appealed.

Hydraulic fracturing, or fracking, injects a high-pressure mix of water, sand and chemicals underground to crack open formations and make it easier to recover oil and gas. It's a widespread practice that led to an energy boom in Colorado, the nation's No. 7 energy-producing state, and elsewhere.

More

Feds plan Tuesday announcement on protections for imperiled sage grouse

DENVER (AP) — U.S. officials plan to make a major announcement Tuesday on efforts to protect an imperiled bird that could have implications for the energy and ranching industries.

The Interior Department says governors of Colorado, Montana, Nevada and Wyoming are among those who plan to join Secretary Sally Jewell and other federal officials for the announcement about greater sage grouse at the Rocky Mountain Arsenal National Wildlife Refuge outside Denver.

The government faces a Sept. 30 court-imposed deadline to decide whether it should list the chicken-sized birds as a threatened or endangered species.

Greater sage grouse range from California to the Dakotas. They've dwindled from millions to no more than 500,000 amid loss of their sagebrush habitat.

More

Investigation opens in deaths of 25 walrus on Alaska beach

By Dan Joling

ANCHORAGE, Alaska (AP) — The federal government has opened a criminal investigation into the death of 25 Pacific walrus found on an isolated northwest Alaska beach.

U.S. Fish and Wildlife Service spokeswoman Crystal Leonetti says agency investigators have not returned from the site at Cape Lisburne but that the case is now in the hands of the U.S. Attorney's office.

Initial reports last week said the walrus had been shot but the Fish and Wildlife Service refused to speculate on the cause of death until agency personnel had examined the carcasses.

A person connected to an Air Force radar station at Cape Lisburne spotted the animals and notified the agency Wednesday.

More

VW rocked by emissions scandal as prosecutors come calling

By Frank Jordans and Pan Pylas

BERLIN (AP) — Volkswagen's chief executive was under withering pressure Monday as an emissions-testing scandal erased more than 13 billion euros (around $15 billion) from the company's market value in a single trading session.

The stock plunge followed revelations that the German carmaker had rigged U.S. emissions tests for nearly 500,000 diesel cars. VW CEO Martin Winterkorn apologized, acknowledging that his company had "broken the trust of our customers and the public."

Investors considering the financial and reputational implications of the scandal on the world's top-selling carmaker dumped VW stock Monday, driving the company's share price down a stunning 17.1 percent in the first trading since the U.S. Environmental Protection Agency announced the violations. VW shares closed at a nearly three-year low of 133.70 euros.

VW, facing as much as $18 billion in fines, has halted U.S. sales of the affected vehicles and pledged to cooperate with regulators.

More

Study: Twice as much trash put in landfills than estimated

By Seth Borenstein

WASHINGTON (AP) — Americans are sending more than twice as much trash to landfills as the federal government has estimated, according to a new study.

It turns out that on average America tosses five pounds of trash per person per day into its landfills, according to an analysis of figures from the same study, which is based on actual landfill measurements instead of government estimates.

For years, the U.S. Environmental Protection Agency relied on estimates to determine how much trash was being sent to landfills. But in 2010, the agency required most municipal landfills to measure and report how much trash was heading into the dumps, as part of an effort to lower heat-trapping methane emissions. Researchers at Yale University looked at the records for more than 1,200 landfills and calculated amounts, predominantly based on weights.

They figured it was 289 million tons in 2012, according to a study published Monday in the journal Nature Climate Change. For the same year, EPA estimated the figure to be 135 million tons.

More

A message from America's Natural Gas Alliance

Clean is Powerful. Natural gas helps Georgia Power's plant generate electricity with 50% fewer emissions. Think about it.

Learn more at www.thinkaboutit.org.

Iranians collect samples, IAEA says that's OK

VIENNA (AP) — The chief of the U.N. nuclear agency acknowledged Monday that samples used to determine whether Iran tried to develop a nuclear weapon were collected by the Iranians instead of agency experts, but insisted the probe stands up to strict agency standards.

Such sampling of soil, air or dust from equipment is usually done by the International Atomic Energy Agency's own experts. But IAEA chief Yukiya Amano confirmed that Iranians carried out that part of the probe at Parchin, where the agency suspects that explosive triggers for nuclear weapons might have been tested in the past.

Diplomats say Iran insisted on the compromise as a condition for any probe of Parchin.

Deputy IAEA Director General Tero Varjoranta said that there have been more than 40 instances of letting a country being inspected use their own nationals to do the sampling and that the process is only a small part of a rigid regimen established by the agency to make sure there is no cheating.

More

Britain to guarantee Chinese investment in new nuclear plant

By The Associated Press

LONDON (AP) — The British government said Monday it will underwrite $3.1 billion (2 billion pounds) in Chinese financing for a new nuclear power plant in southwest England, as it encourages major Chinese investment in the U.K. nuclear sector.

Sponsored Links

Treasury chief George Osborne, on a trip to China, said Britain would underwrite China's stake in the Hinckley Point power station. He said the deal "opens the door to majority Chinese ownership of a subsequent nuclear project" planned for England's southeast.

British officials hope Monday's announcement will encourage France's EDF Energy — which is backed in the project by China General Nuclear Corporation and China National Nuclear Corporation — to make a final decision this year to build Britain's first new nuclear power station in two decades.

The plant, which had been due to start producing electricity in 2023, has been mired in delays, and critics say it is uneconomical. Britain has agreed to grant operators a fixed above-market electricity price for 35 years to ensure their investment will break even.

More

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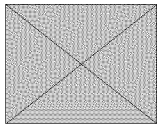

Week in Review – House Panel Moves To Lift Export Ban

Congress Gears up for Papal Visit.

Click here to read the brief

More

OMB giving natural gas waste rule final review

The Bureau of Land Management's proposed rule regulating venting and flaring of natural gas at drilling operations on federal land is undergoing its final review at the White House Office of Management and Budget, The Hill reports.

More

Financial analyst predicts renewed gas boom in future

One major financial analyst says natural gas, which is holding its own but not growing robustly this year, is on track for a renewed boom in 2017-18, FuelFix reports.

More

Arctic drilling: Hilcorp plan for Beaufort island under review

The Bureau of Ocean Energy Management is taking public comment on Hilcorp Energy Co.'s proposal to build a gravel island in the Beaufort Sea as part of its plan to drill for oil

Trouble seeing this email? Click here.

there, FuelFix reports.

More

Stars wear green climate ribbons at Emmys

Green ribbons worn by a number of stars at the Emmys Sunday—bearing the legend #DemandClimateAction—were distributed on behalf of the Natural Resources Defense Council, which said the idea was to build support for action at the Paris climate conference in December, E! Online reports.

More

More companies pricing carbon emissions: CDP

CDP—a non-profit based in Britain that tracks corporations' greenhouse gas emissions—is reporting that the number of large companies doing internal pricing of carbon emissions has jumped to 437, E&E reports.

More

Carbon schemes growing, but pricing too low: World Bank

The World Bank says there are 38 carbon pricing systems in operation globally—up from 20 in 2012—but the prices in them are so low that they aren't doing enough to reduce global warming, Reuters reports.

More

Oil jumps on expectations of production cuts

A report that low prices are jeopardizing the future of drilling projects helped boost oil markets Monday. U.S benchmark crude zoomed up $2, or 4.5 percent, to $46.68 a barrel on the Nymex, while in London, Brent gained $1.45 to $48.92, Marketwatch reports.

More

Apple aims for electric cars by 2019

Apple hopes to build and ship electric cars by 2019, sources have told The Wall Street Journal.

More

Wind power faces multiple challenges in Pennsylvania

If wind power is to play a role in helping Pennsylvania meet obligations under the Environmental Protection Agency's Clean Power Plan, the state will have to tackle a number

of obstacles including sorting out energy tax credits and credit trading rules, the Pittsburgh Tribune-Review reports.

More

Brazil prosecutor traces Petrobras corruption back to Lula aide

A prosecutor is alleging that the Petrobras corruption scandal was born in the office of Jose Dirceu, the chief of staff for then-president Luiz Inacio Lula da Silva from 2003 to 2005, Reuters reports.

More

Upcoming Events

- Sep. 22, Washington: Resources for the Future to hold a forum to examine the potential impact of carbon pricing, through taxes or credits, on low-income households and communities. 12:30 pm , 1616 P St. NW.
- Sep. 22, Commerce City, Colorado: Interior Secretary Sally Jewell to join federal officials and Govs., John Hickenlooper, Colo., Matt Mead, Wyo., Steve Bullock, Mont., and Brian Sandoval, Nev., to make an announcement regarding the greater sage-grouse. Dial in: 1-888-391-6809. Passcode: INTERIOR. 12:00 pm , Rocky Mountain Arsenal National Wildlife Refuge Visitor Center 6550 Gateway Road Commerce City, CO 80022
- Sep. 22, Washington: ClearView Energy Partners Managing Director to speak at the American Gas Association's Natural Gas Roundtable. 12:00 pm , University Club, 1135 16th Street, NW.
- Sep. 22, Washington: The United States Energy Association to hold a forum on the state of the global liquefied natural gas exports and the role the U.S. can play. Christopher Goncalves, managing director and co-chair of BRG's Energy and Natural Resources Practice, to speak. 10:30 am , 1300 Pennsylvania Avenue, NW.

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To: Bunker, Byron[bunker.byron@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 10:04:26 PM
Subject: Fwd: House panel to hold hearing on Volkswagen violations

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Begin forwarded message:

From: "McCabe, Janet" <McCabe.Janet@epa.gov>
Date: September 21, 2015 at 5:47:31 PM EDT
To: "Grundler, Christopher" <grundler.christopher@epa.gov>, "Niebling, William" <Niebling.William@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Vaught, Laura" <Vaught.Laura@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>
Subject: Fwd: House panel to hold hearing on Volkswagen violations

FYI

Sent from my iPhone

Begin forwarded message:

From: POLITICO Pro <politicoemail@politicopro.com>
Date: September 21, 2015 at 4:45:56 PM CDT
To: <mccabe.janet@epa.gov>
Subject: House panel to hold hearing on Volkswagen violations
Reply-To: POLITICO subscriptions <reply-fe8a1075716003787d-602736_HTML-637935392-1376319-0@politicoemail.com>

House panel to hold hearing on Volkswagen violations

09/21/2015 05:11PM EDT

The House Energy and Commerce Committee's oversight arm is planning a hearing "in the coming weeks" on the accusations that Volkswagen purposefully circumvented air pollution laws on several models of diesel cars, the panel announced today.

"We will follow the facts. We are also concerned that auto consumers may have been deceived - that what they were purchasing did not come as advertised," committee Chairman Fred Upton (R-Mich.) and Oversight and Investigations Subcommittee Chairman Tim Murphy (R-Pa.) said in a joint statement. "The American people deserve answers and assurances that this will not happen again."

The EPA announced Friday that the German automaker used "defeat devices" to trick emissions tests for nitrogen oxides, which cause smog, and urged the company to initiate a recall.

To view online:
https://www.politicopro.com/transportation/whiteboard/2015/09/house-energy-and-commerce-to-hold-oversight-hearing-on-volkswagen-violations-060774

To change your alert settings, please go to
https://www.politicopro.com/member/alerts

This email was sent to mccabe.janet@epa.gov by: POLITICO, LLC 1000 Wilson Blvd. Arlington, VA, 22209, USA

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Hengst, Benjamin
Sent: Mon 9/21/2015 10:05:41 PM
Subject: Re: House panel to hold hearing on Volkswagen violations

This story is BIG

On Sep 21, 2015, at 6:04 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Begin forwarded message:

From: "McCabe, Janet" <McCabe.Janet@epa.gov>
Date: September 21, 2015 at 5:47:31 PM EDT
To: "Grundler, Christopher" <grundler.christopher@epa.gov>, "Niebling, William" <Niebling.William@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Vaught, Laura" <Vaught.Laura@epa.gov>, "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>
Subject: Fwd: House panel to hold hearing on Volkswagen violations

FYI

Sent from my iPhone

Begin forwarded message:

From: POLITICO Pro <politicoemail@politicopro.com>
Date: September 21, 2015 at 4:45:56 PM CDT
To: <mccabe.janet@epa.gov>
Subject: House panel to hold hearing on Volkswagen violations
Reply-To: POLITICO subscriptions <reply-fe8a1075716003787d-602736_HTML-637935392-1376319-0@politicoemail.com>

House panel to hold hearing on Volkswagen violations

09/21/2015 05:11PM EDT

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This email was sent to mccabe.janet@epa.gov by: POLITICO, LLC 1000 Wilson Blvd. Arlington, VA, 22209, USA

To: Ex. 6
From: Belser, Evan
Sent: Mon 9/21/2015 10:13:24 PM
Subject: RE: 2012 vw passat

Ex. 6

Thank you for your note. I can say that there is no recall at this point. The notice of violation does allege violations for earlier model year Passats, and the public website on this matter (http://www3.epa.gov/otaq/cert/violations.htm) has been updated to reflect that. The press release should have said "Passat (Model Years 2012-2015).

Regards,
Evan Belser
Chief, Mobile Source Enforcement Branch, Air Enforcement Division
National Coordinator for Administrative Litigation, Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
202-564-6850

-----Original Message-----
From: Kaul, Meetu
Sent: Monday, September 21, 2015 4:00 PM
To: Belser, Evan
Subject: FW: 2012 vw passat

Can you respond?

Sorry to forward all these to you.

_____

Ms.Meetu Kaul, Attorney-Advisor
National Marine Enforcement Coordinator
United States Environmental Protection Agency Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A) Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Ex. 6
Sent: Monday, September 21, 2015 3:20 PM
To: Kaul, Meetu
Subject: 2012 vw passat

Hello Mr. Kaul,

I have read the notice the EPA sent to Volkswagen. I have a 2012 Passat diesel. I see that the notice contains a table that includes the 2012 and 2013 Passat vehicles as containing the offending AECD. However, the recall and other information contained online does not list 2012 and 2013 Passats, only the

2014 and 2015. Can you comment on why the 2012 and 2013 Passats are not included in the recall at this time when they contain the same AECD?

Thank you for your time,

Ex. 6

To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Belser, Evan
Sent: Mon 9/21/2015 10:34:58 PM
Subject: FW: Bloomberg reporting on Criminal investigation on VW

From: Starfield, Lawrence
Sent: Monday, September 21, 2015 6:34 PM
To: Belser, Evan; Werner, Jacqueline; Kelley, Rosemarie
Subject: FW: Bloomberg reporting on Criminal investigation on VW
Importance: High

FYI.

Sent from my Windows Phone

From: Conger, Nick
Sent: 9/21/2015 3:00 PM
To: Giles-AA, Cynthia; Wilson, Shari; Starfield, Lawrence; Barnet, Henry; Parker, Doug; Mazakas, Pam
Subject: FW: Bloomberg reporting on Criminal investigation on VW

FYI

-----Original Message-----
From: Birgfeld, Erin
Sent: Monday, September 21, 2015 2:58 PM
To: Purchia, Liz; Grundler, Christopher; Valentine, Julia; Senn, John; Conger, Nick
Cc: Bunker, Byron
Subject: Bloomberg reporting on Criminal investigation on VW
Importance: High

http://www.bloomberg.com/news/articles/2015-09-21/volkswagen-said-to-be-target-of-u-s-criminal-probe-on-emissions

The U.S. Justice Department is conducting a criminal investigation of Volkswagen AG's admission to cheating on federal air pollution tests, according to two U.S. officials familiar with the inquiry.
Volkswagen said last week it's cooperating with regulators probing gaps between emissions on the road and lab tests on some diesel models. The U.S. officials described the inquiry on condition of anonymity because it's a continuing investigation.
Volkswagen plunged as much as 23 percent Monday to 125.40 euros in Frankfurt, wiping out about 15.6 billion euros ($17.6 billion) in market value. The stock closed at 132.2 euros, its lowest in more than three years.

Justice Department spokesman Wyn Hornbuckle declined to comment.

To: Purchia, Liz[Purchia.Liz@epa.gov]
Cc: Reynolds, Thomas[Reynolds.Thomas@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 11:08:00 PM
Subject: Re: ABC NEWS - Interview instructions....

Non-Responsive

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 6:50 PM, Purchia, Liz <Purchia.Liz@epa.gov> wrote:

> Well that is very frustrating. I'm sorry Chris, after all that. You did a great job.
>
> Liz Purchia
> U.S. EPA
> 202-564-6691
> 202-841-2230
>
> Begin forwarded message:
>
> **From:** "Steinberger, Daniel" <Daniel.Steinberger@abc.com>
> **Date:** September 21, 2015 at 6:44:20 PM EDT
> **To:** "Purchia, Liz" <Purchia.Liz@epa.gov>
> **Subject: RE: ABC NEWS - Interview instructions....**
>
> Thanks for the help today.
>
> WELL –
>
> After all that – I am forced to send the note I hate to write.
>
> They had to kill our story really late – other news sadly bumped us out.
>
> My sincerest apologies.
>
> Hope we can do something with you again soon – please keep me up to date on what happens with this.

Best,

Daniel

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 4:20 PM
To: Steinberger, Daniel
Subject: Re: ABC NEWS - Interview instructions....

Leaving now

Liz Purchia

U.S. EPA

202-564-6691

202-841-2230

On Sep 21, 2015, at 3:48 PM, Steinberger, Daniel <Daniel.Steinberger@abc.com> wrote:

We are at 1717 DeSales Street NW

Opposite the Mayflower hotel

My cell is [Ex. 6] – when you get here – ask for me – thanks again, see you soon!

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 2:30 PM
To: Steinberger, Daniel

Subject: RE: ABC NEWS

If you were to send a camera crew when would that be?

Could you share specific questions?

From: Steinberger, Daniel [mailto:Daniel.Steinberger@abc.com]
Sent: Monday, September 21, 2015 2:08 PM
To: Purchia, Liz
Subject: RE: ABC NEWS

Yikes!

Can you call me please – 2 Ex. 6 .

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 2:06 PM
To: Steinberger, Daniel
Subject: Re: ABC NEWS

Non-Responsive

We don't have anyone for you to speak with today. I'd recommend an auto reporter who could speak on the issue.

Dave shepardson at the Detroit news follows this closely

Liz Purchia

U.S. EPA

202-564-6691

202-841-2230

On Sep 21, 2015, at 1:54 PM, Steinberger, Daniel <Daniel.Steinberger@abc.com> wrote:

Any luck? We'd really love to have you on this.

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 1:12 PM
To: Steinberger, Daniel
Subject: RE: ABC NEWS

Checking. Could you send specific questions you'd like to ask? Who would conduct the interview and where?

From: Steinberger, Daniel [mailto:Daniel.Steinberger@abc.com]
Sent: Monday, September 21, 2015 1:05 PM
To: Purchia, Liz
Subject: RE: ABC NEWS

Yes. on camera – if not the head – is there a #2 or #3?

Doing story today.

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 1:02 PM
To: Steinberger, Daniel
Subject: RE: ABC NEWS

Are you looking for an on-camera interview?

Non-Responsive

From: Steinberger, Daniel [mailto:Daniel.Steinberger@abc.com]
Sent: Monday, September 21, 2015 1:00 PM
To: Purchia, Liz
Subject: RE: ABC NEWS

Any interview you would be willing to give us?

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 12:59 PM
To: Steinberger, Daniel
Subject: FW: ABC NEWS

Hi Daniel – Our ability to comment on VW is limited due to the ongoing investigation.

Sent from USEPA iPhone

Begin forwarded message:

> **From:** "Steinberger, Daniel" <Daniel.Steinberger@abc.com>
> **Date:** September 21, 2015 at 12:31:33 PM EDT
> **To:** Press <press@epa.gov>
> **Subject: ABC NEWS**
>
> Anybody around for a short interview today on VW for ABC WORLD NEWS TONIGHT.
>
> Please get back to me ASAP.
>
> Thanks,
>
> Daniel Steinberger
>
> ABC NEWS

202-567-8778

To: Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 11:19:09 PM
Subject: Fwd: Volkswagen Clips 9/21/2015

Ex. 5

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Begin forwarded message:

From: "Millett, John" <Millett.John@epa.gov>
Date: September 21, 2015 at 4:38:06 PM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>, "Grundler, Christopher" <grundler.christopher@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: FW: Volkswagen Clips 9/21/2015

The press office's intern has been updating this thread as clips have come in. Most recent articles at the top. A lot of scrolling down to do here . . .

Ex. 5

~~~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822
~~~~~~~~~~~~~~~~~~

From: Gong, Kristiene
Sent: Monday, September 21, 2015 4:33 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Chicago Tribune:

http://www.chicagotribune.com/business/columnists/ct-rosenthal-vw-emissions-0922-biz-20150921-column.html

VW comes clean on dark heart of its diesel cars. Can it clear the air?

Phil Rosenthal

Seems VW fought diesel wars with smoke and mirrors, mostly smoke. What the fahrvergnügen?!

Volkswagen called it clean diesel. Clean like Lance Armstrong. Clean like the Chicago River.

Seriously, what the fahrvergnügen?!

VW has admitted to the Environmental Protection Agency that hundreds of thousands of its diesel cars have been using what is literally a killer app.

The software allowed the vehicles to sail through U.S. emissions tests while reportedly spewing 10 to 40 times the level of certain pollutants as allowed in ordinary use.

It's been smoke and mirrors — mostly smoke — for the last seven model years.

We're talking about 2009, 2010, 2011, 2012, 2013, 2014 and 2015 VW Golfs, Jettas and Beetles, along with Audi A3s, equipped four-cylinder, 2.0-liter turbodiesel engines. Oh, almost forgot the 2012-15 Passats.

That's nearly half-a-million vehicles in all, belching nitrogen oxide to preserve mileage ratings and performance no other carmaker could seem to match, thanks to emissions control systems programmed to operate only when testing protocols were detected.

So we get more smog and ozone and poisons tied to a litany of health problems, such as asthma attacks and other respiratory diseases, along with premature death. VW gets more car sales.

Score one for German engineering and systematic subterfuge, trading our health for its profits.

Apparently the EPA was first tipped to VW's plot when discrepancies showed up in independent testing. But it seems like precisely the sort of thing James Bond is told of when strapped to a nuclear missile about to launch.

The word diabolical comes to mind.

So does evil.

One pictures even C. Montgomery Burns, king of the corner-cutters on "The Simpsons," looking askance. And we don't know yet if VW is the only offender.

The auto industry isn't overburdened by high expectations, particularly in the last 12 months or so.

General Motors last week agreed to a $900 million settlement to end a criminal investigation into its failure to disclose a deadly ignition defect.

Toyota last year agreed to a $1.2 billion penalty for withholding information about its vehicles' unintended acceleration linked to other fatalities.

Takata, it's been revealed, knew of dangerous, potentially fatal defects in its airbags long before alerting federal regulators, leading to the recall of millions of Honda, Toyota, Chrysler, Subaru, GM, Mitsubishi, BMW, Mazda, Nissan and Ford vehicles.

Yet, as Automotive News noted, "Compared with other run-ins between the EPA and automakers, VW's alleged violation stands out in its brazenness."

This takes that kind of amoral corporate behavior to a whole other threat level.

VW didn't just conceal something it discovered endangering people. It created technology for the specific purpose of allowing it to benefit from endangering people.

Even if you're one of those people who somehow isn't a fan of clean-air standards, it's not a political statement to press on and try to throw authorities off the trail. It's just a crime.

Tampering with emissions control systems, under terms of the Clean Air Act, could mean a fine for VW as high as $37,500 per vehicle or roughly $18 billion, though you know what happens when you start to haggle with car guys.

But even if VW is fined and there's a mandatory recall, some drivers will be reluctant to embrace the fix because it likely will make the vehicle less effective and efficient than the

one they thought they bought.

Funny we never caught wind of any of this in those slightly discomfiting VW commercials with the old ladies hitting on a salesman. Least we don't remember any mention of it.

VW pulled the ads off the air and, to the extent it could, off YouTube as word of its scandal came out, yet more proof that a carmaker can indeed move fast to protect something it actually cares about — like its bottom and bottom line.

This isn't the Olympics. It's one thing to try to keep test results from showing banned substances in one's own body, quite another to try to mask bad stuff being inflicted on others.

Cough.

This goes beyond the venality of one corporation to whether there's any confidence left in diesel cars and credibility in the entire auto industry. Even if this is as far as it goes, it will take quite a while to clear the air.

VW recently surpassed Toyota to become the world's largest carmaker, an achievement now eclipsed by the suspicion that there is nothing it wouldn't do.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 4:13 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Bloomberg (via Australian Financial Review):

http://www.afr.com/news/world/volkswagen-faces-us-criminal-probe-on-emissions-20150921-gjrtss

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Volkswagen faces US criminal probe on emissions

The US Justice Department is conducting a criminal investigation of Volkswagen's admission to cheating on federal air pollution tests, according to two US officials familiar with the inquiry.

Volkswagen said last week it's cooperating with regulators probing gaps between emissions on the road and lab tests on some diesel models, affecting more than half a million cars. The US officials described the inquiry on condition of anonymity because it's a continuing investigation.

The Wolfsburg, Germany-based automaker plunged as much as 23 per cent Monday to 125.40 euros in Frankfurt, wiping out about 15.6 billion euros ($US17.6 billion) in market value. The stock closed at 132.2 euros, its lowest in more than three years.

Volkswagen's admission is putting pressure on Chief Executive Officer Martin Winterkorn to repair the reputation of the world's biggest carmaker. Winterkorn, whose contract renewal is scheduled for a supervisory board vote on Friday, now faces a serious challenge to his leadership, said Arndt Ellinghorst, a London-based analyst for Evercore ISI.

"This latest saga may help catalyze further management changes at VW," Ellinghorst wrote in a note Monday.

Justice Department spokesman Wyn Hornbuckle declined to comment.

Criminal inquiries can take months or years and lead to charges against individuals and

companies. They can also result in fines and deferred-prosecution agreements, such as the one recently struck with General Motors Co., to spur companies into improving their behaviour and addressing problems revealed during the investigations.

Volkswagen admitted on September 18 to fitting some of its US diesel vehicles with software that turns on full pollution controls only when the car is undergoing official emissions testing, the Environmental Protection Agency said Friday. Affected are diesel versions of the VW Jetta, Golf, Beetle and Passat and the Audi A3.

During normal driving, the cars with the software -- known as a "defeat device" -- would pollute 10 times to 40 times the legal limits, the EPA estimated. The discrepancy emerged after the International Council on Clean Transportation commissioned real-world emissions tests of diesel vehicles including a Jetta and Passat, then compared them to lab results.

VW said it's cooperating with regulators probing gaps between emissions on the road and lab tests on some diesel models. According to the EPA, the company insisted for a year that discrepancies were mere technical glitches.

Winterkorn, who has led VW since 2007, was forced to halt sales of the cars on Sunday and issue a public apology, saying he's "deeply sorry" for breaking the public's trust and that VW would do "everything necessary in order to reverse the damage this has caused."

The violations could result in as much as $US18 billion in fines, based on the cost per violation and the number of cars.

The US accusations are "grave" and must be clarified swiftly, said Stephan Weil, prime minister of the German state of Lower Saxony, which owns 20 percent of Volkswagen's voting shares. "Possible consequences can be decided after that."

The European Commission also said it's taking VW's cheating seriously and is in contact with US regulators and the company about details of the case.

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The Guardian:

http://www.theguardian.com/business/2015/sep/21/volkswagen-emissions-scandal-sends-shares-in-global-carmakers-reeling

Volkswagen emissions scandal could snare other companies, whistleblower claims

Billions wiped off value of industry heavyweights amid concerns that manipulation of air pollution data could be 'very widespread'

Joanna Walters Graham Ruddick and Sean Farrell

The emissions-fixing scandal that has engulfed Volkswagen in the US could extend to other companies and countries, one of the officials involved in uncovering the alleged behavior told the Guardian on Monday.

Billions of pounds have been wiped off the value of global carmakers amid growing concerns that emissions tests may have been rigged across the industry.

"We need to ask the question, is this happening in other countries and is this happening at other manufacturers? Some part of our reaction is not even understanding what has happened exactly," said John German, one of the two co-leads on the US team of the International Council for Clean Transportation (ICCT), the European-based NGO that raised the alarm.

Shares in Volkswagen fell by almost a fifth after the world's second biggest carmaker issued a public apology in response to US allegations that it used a "defeat device" to falsify emissions data.

The US Justice Department is conducting a criminal investigation of Volkswagen

admission, according to Bloomberg, which cited two officials familiar with the inquiry.

The company could face a fine of up to $18bn (£11.6bn), criminal charges for its executives, and legal action from customer and shareholders. The US law firm Hagens Berman has already launched a class-action law suit on behalf of customers who bought the affected cars.

VW shares fell by 19% in Frankfurt, wiping almost €15bn (£10.8bn) off its value. Shares in Renault, Volkswagen's French rival, also dropped by 4%, while Peugeot was down 2.5%, Nissan 2.5% and BMW 1.5% amid concerns they could be caught up in investigations.

The US Environmental Protection Agency said on Friday that VW had installed illegal software to cheat emission tests, allowing its diesel cars to produce up to 40 times more pollution than allowed. The US government ordered VW to recall 482,000 VW and Audi cars produced since 2009.

In response, Martin Winterkorn, chief executive of VW, said on Sunday he was "deeply sorry" for breaking the trust of the public and ordered an external investigation.

German tipped off regulators at the California Air Resources Board (Carb) and the US Environmental Protection Agency (EPA) after conducting tests that showed major discrepancies in the amount of toxic emissions some VW cars were pumping out compared with the legal limits.

Max Warburton, an analyst at the financial research group Bernstein, said: "There is no way to put an optimistic spin on this – this is really serious."

A British expert in low-emission vehicles claimed the manipulation of air pollution data could be "very widespread" and that tests in Europe are "much more open to this sort of abuse".

Greg Archer, a former government adviser and head of clean vehicles at the respected Transport & Environment thinktank, said: "I am not surprised. There has been a lot of anecdotal evidence about carmakers using these 'defeat devices'. All credit to the US's EPA for investigating and finding the truth."

Archer, the former managing director of the UK's Low Carbon Vehicle Partnership and non-executive director for the government's Renewable Fuels Agency, said the scandal could spread into petrol cars and CO2 levels. "It is probably not limited to diesel and not limited to emissions," he added.

The "defeat devices" are thought to work by injecting more urea – an exhaust fluid – into the car when it is being tested. This limits nitrogen oxide emissions. The car detects it is being tested because devices such as the anti-collision systems have to be turned off when it is in the laboratory. The extra urea is not injected into the car when it is on the road because it would quickly run out.

Archer claims European tests are more open to abuse because they are conducted before the car goes into mass production and by companies that have been paid by the carmakers. These testing companies have been verified by regulators in each country, such as the Vehicle Certification Agency, but in the US the tests are conducted by an independent body.

Industry leaders in Britain claimed there was "no evidence" that manufacturers are cheating the system in Europe but admitted it needs to be reformed.

Mike Hawes, chief executive of the Society of Motor Manufacturers and Traders, the industry trade body, said: "The EU operates a fundamentally different system to the US – with all European tests performed in strict conditions as required by EU law and witnessed by a government-appointed independent approval agency. There is no evidence that manufacturers cheat the cycle.

"The industry acknowledges, however, that the current test method is outdated and is seeking agreement from the European Commission for a new emissions test that embraces

new testing technologies and is more representative of on-road conditions."

The US allegations involve a series of diesel cars produced by VW and the brands it owns, such as Audi. These include the Audi A3, VW Jetta, Beetle, Golf and Passat models. VW has halted sales of these models.

Jochen Flasbarth, a senior environment official in the German government, accused Volkswagen of "blatant consumer deception" over the scandal. The country's economy minister, Sigmar Gabriel, also warned it could damage the reputation of the country's vital automotive industry.

"That this is a bad case, I think is clear," Gabriel said. "You will understand that we are worried that the justifiably excellent reputation of the German car industry and in particular that of Volkswagen suffers." The German government has launched its own investigation into VW and held talks with executives.

The scandal puts the future of Volkswagen chief Winterkorn in serious doubt. Earlier this year he won an internal power struggle with Ferdinand Piëch, who stepped down as chairman. The board of the company is due to meet on Friday to discuss extending Winterkorn's contract.

Winterkorn has been at the helm of VW since 2007 and has been directly responsible for research and development since then.

Guido Reinking, a German automotive analyst, told German television station n-tv: "It's almost impossible to imagine that he didn't know about this special way of programming the engine."

David Bailey, professor of industrial strategy at Aston University in Birmingham, said: "If it is the case that they have been trying to hoodwink regulators, it's a really dumb thing to do. Regulators will look at this more closely now. There has been growing concern about diesel cars and nitrous oxide emissions. The industry has been trying to make the case that

the latest regulations largely deal with that issue but regulators will now look more closely at whether they have."

In the wake of the scandal two senior VW executives cancelled a planned appearance at a media event in New York with rock star Lenny Kravitz scheduled for Monday evening.

Herbert Diess, chairman of the VW brand's management board, and Heinz-Jakob Neusser, VW's board member in charge of technical development, had planned to attend the event to introduce the latest version of the Passat mid-size sedan.

The chief executive of VW's US arm, Michael Horn, was still due to attend the event. He is expected to provide a statement about the situation.

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Jalopnik:

http://jalopnik.com/volkswagen-is-now-the-target-of-a-criminal-investigatio-1732130214

Volkswagen Is Now The Target Of A Criminal Investigation: Report

Michael Ballaban

In a move that seemed like an inevitability at this point, the United States Department of Justice is said to have opened a criminal investigation into Volkswagen's admission to cheating on diesel emissions tests, a report from Bloomberg said.

While we had heard rumblings of a possible criminal probe earlier, this news appears to confirm that VW is in fact the subject of an investigation that could lead to prosecutions.

It's way too early to tell whether or not any individuals will personally be held criminally liable for the company's deceptions, but it's not out of the realm of possibility. We haven't

seen a case in a long time where a company has admitted intentionally circumventing the law, rather than just a plea of massive institutional incompetence, so it's anyone's guess as to what will happen.

The U.S. Environmental Protection Agency has said that the company can be held responsible for up to $18 billion in fines.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 4:02 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Business Insider:

http://www.businessinsider.com/the-us-government-is-launching-a-criminal-investigation-into-vws-falsified-emissions-figures-2015-9

The US government is launching a criminal investigation into VW's falsified emissions figures

Benjamin Zhang

The US Department of Justice has launched a criminal probe into Volkswagen's falsification of emissions data, Bloomberg news is reporting.

Last week, the Environmental Protection Agency accused the automaker of falsifying the data using secret software in nearly 500,000 cars.

According to Bloomberg's Del Quentin Wilber, two government officials close to the situation say the Justice Department is conducting a criminal investigation into the allegations.

Last week, the EPA accused VW of using the hidden software — called a "defeat device" — to dodge clean-air standard during emissions testing.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," assistant administrator for the Office of Enforcement and Compliance Assurance Cynthia Giles said in a statement on Friday.

“Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters.”

The EPA alleges that VW installed software that detects when the car is undergoing emissions testing, at which point the software would turn on all of the car's emissions control systems. But the EPA claims that the software greatly reduces the cars' pollution-control systems during normal driving conditions.

"This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," the EPA said in a statement.

Across the Atlantic, the German government is also taking a look at Volkswagen's emissions data. A spokesperson for the country's Motor Vehicle Agency told the Wall Street Journal that is has asked automakers to provide accurate emissions information to "determine whether similar instances of manipulation have taken place in Germany or Europe," However, there is no word of any official investigation on the part of the German government.

Over the weekend, VW CEO Martin Winterkorn issued the following statement:

The U.S. Environmental Protection Agency and the California Air Resources Board (EPA and CARB) revealed their findings that while testing diesel cars of the Volkswagen Group they have detected manipulations that violate American environmental standards.

The Board of Management at Volkswagen AG takes these findings very seriously. I personally am deeply sorry that we have broken the trust of our customers and the public. We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case. Volkswagen has ordered an external investigation of this matter.

The recall affects 482,000 diesel-powered cars sold in the US since 2008. They include:

Volkswagen Jetta TDI: 2009-20015

Volkswagen Beetle TDI: 2009-2015

Audi A3 TDI: 2009-2015

Volkswagen Golf TDI: 2009-2015

Volkswagen Passat TDI: 2014-2015

We have reached out to Volkswagen and the DOJ for comment. We will update when when we hear back.

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Fortune:

http://fortune.com/2015/09/21/volkswagen-emissions-recall-scandal/

Dear Volkswagen: Exaggeration? Not so bad. Deception? Never okay

by Jennifer Reingold @jennrein SEPTEMBER 21, 2015, 3:44 PM EDT

One wonders what would have happened had Volkswagen opted for exaggerating its results rather than falsifying them.

The business world—and the journalists who cover it—have always rewarded a healthy bit of hype. Best Ever! New and Improved! Now with enhanced whatevers!

Actually, the love of the big claim goes far beyond the business world and is interwoven throughout society. Donald Trump's current popularity is only the latest example of bombast, er, trumping reality.

But we do have limits, as the scandal at Volkswagen shows. So far, the company's stock price has fallen almost 20% since it admitted on September 18 that it had installed software that allowed its cars to fake their performance on emissions testing in order to fool the EPA.

No one knows what will happen to the $221 billion in sales car company—the world's largest—going forward, and whether the deception stretches all the way to the CEO, Martin Winterkorn. But one wonders what would have happened had the company opted for exaggerating its results rather than falsifying them.

Don't get me wrong: I'm not advocating that any performance standards—particularly those that affect safety and health—should ever be presented with anything but the full truth. But this move was so brazen, so breathtakingly full of chutzpah, that it is hard to imagine VW's brand recovering for a very, very long time; nor, one imagines, will its culture.

The plot goes far beyond one or two people hiding out in a cubicle and must have involved hundreds of people building such a system and making sure it was implemented inside of 428,000 cars. One wonders what the company might have been able to accomplish instead if it put all that brainpower toward meeting emissions requirements rather than circumventing them.

Consider the alternative: VW tried—and failed—to meet the EPA's emissions standards, after saying that they believed they had diesel engines that did the job. The EPA (which, it's worth noting, relies primarily on self-tested data) would have—hopefully—tested its engines, found Volkswagen deficient, and fined the company. It would have been costly, yes, but it wouldn't have been all that surprising. And VW's credibility wouldn't have been destroyed in the process. After all, exaggeration, for better or worse, is just how the game is played.

MarketWatch:

http://www.marketwatch.com/story/white-house-quite-concerned-about-volkswagen-emissions-charges-2015-09-21

White House 'quite concerned' about Volkswagen emissions charges

'Quite concerned': How White House press secretary Josh Earnest characterized Obama administration reaction to the allegations against Volkswagen.

By ROBERT SCHROEDER

The Obama administration is "quite concerned" over allegations that Volkswagen cheated on U.S. emissions tests, a White House spokesman said Monday, but added it is up to the Environmental Protection Agency to investigate the matter.

"I think it's fair to say that we're quite concerned by some of the reports that we've seen about the conduct of this particular company," spokesman Josh Earnest told reporters at a regular briefing.

On Friday, the Environmental Protection Agency and the California Air Resources Board alleged that Volkswagen VLKAY, -17.38% VOW3, -18.19% used software in cars to make diesel-powered engines appear to have lower levels of emissions than they actually did. The company halted U.S. sales of some diesel-powered cars.

Earnest said it is ultimately the responsibility of the EPA to look at the issue, "and that's exactly what they're doing."

Reaction from Congress was minimal — though that could change.

"VW should expect scrutiny from Congress, legal problems, a potential multibillion-dollar fine and a batch of uncomfortable headlines," wrote Forbes contributor Micheline Maynard on Monday.

"If Volkswagen willfully sought to evade the Clean Air Act and fraudulently sold cars to millions of consumers with this technology, EPA should pursue the most severe action possible to deter others from doing the same," Rep. Frank Pallone, a New Jersey Democrat, said on Friday.

"We must ensure that this does not happen again and that consumers can trust the products that they buy," said Pallone, the top Democrat on the House Energy and Commerce Committee. The panel's oversight and investigations subcommittee held one of the several hearings into the General Motors GM, +0.43% ignition-switch recall in April 2014.

The allegations reportedly include Volkswagen Passats made at the company's Chattanooga, Tenn., facility in 2014 and 2015. A Volkswagen spokesperson did not immediately return a request for comment.

MarketWatch reached out to members of Tennessee's congressional delegation, but none offered any comment.

The 1,400-acre Chattanooga plant has more than 3,200 Volkswagen employees, the company says.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 3:39 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Vox:

http://www.vox.com/2015/9/21/9365667/volkswagen-clean-diesel-recall-passenger-cars

Volkswagen's appalling clean diesel scandal, explained

Brad Plumer

It sounds like the sinister plot of some straight-to-DVD movie. Since 2009, Volkswagen had been installing elaborate software in 482,000 "clean diesel" vehicles sold in the US, so that the cars' pollution controls only worked when being tested by regulators. The rest of the time, the vehicles could freely spew hazardous, smog-forming nitrogen oxides.

Suffice to say, regulators were livid once they caught on. On Friday, the Environmental Protection Agency announced that Volkswagen had very flagrantly violated the Clean Air Act. Not only did the EPA order the German company to fix the affected vehicles,** but the agency has the authority to levy fines as high as $37,500 per car, a maximum of $18 billion. (To put that in perspective, the company's pretax net income was about $4.7 billion last year.) The US government is also mulling criminal charges.

Volkswagen, in other words, is in deep shit. The company's CEO, Martin Winterkorn, is now apologizing profusely and pledging an external probe to find out what happened. VW just halted US sales of its 2015 and 2016 clean diesel vehicles, including Passat, Jetta, Golf, and Beetle models. Meanwhile, VW's stock price plummeted on Monday morning, the company losing nearly one-fifth its market cap in a blink:

This scandal raises a few larger questions, though: Why did Volkswagen cheat in the first place? And why was it so easy for the company to evade regulators for years? To get a better handle on the story, we need to take a brief trip through the tangled history of clean diesel vehicles — the specific cars that VW was selling.

Clean diesel cars were supposed to offer great mileage and low pollution — a tricky task

One basic fact to understand here is that there are two main types of combustion engines widely available today: diesel and gasoline. And there are real trade-offs to each.

Diesel engines have long been popular in Europe, and one of their major advantages is fuel economy. Diesel fuel contains more energy per gallon than gasoline, and the diesel engines themselves are more efficient. Put it together, and the typical diesel car can travel up to 30 percent farther on a gallon of fuel than its gasoline counterpart.

But there's a catch. While diesel cars get better mileage and emit fewer carbon-dioxide emissions, they also emit more nitrogen oxides (NOx), which help form smog, and particulate matter, which can damage lungs. Both types of pollution can have serious health effects.

Historically, Europe has dealt with this trade-off by imposing looser emissions standards on diesel cars in order to pursue higher fuel economy. That's one reason European cities like Athens have a serious smog problem. In the United States, by contrast, we've imposed much stricter rules around smog and other conventional pollutants since the 1970s, one reason diesel cars haven't caught on as widely here. (Heavy trucks favor diesel engines, though.)

In recent years, however, things have shifted. The Obama administration has been ratcheting up fuel-economy standards in the United States, which puts a higher premium on mileage. At the same time, diesel technology has gradually been getting cleaner through a combination of lower-sulfur fuel, advanced engines, and new emission-control technology. So automakers have shown a renewed interest in "clean diesel" cars that, in theory, don't suffer from that trade-off between performance and pollution.

These vehicles have proved popular in the United States. Since 2009, Volkswagen has sold more than 482,000 clean diesel cars containing a four-cylinder turbocharged direct injection engine. This included versions of the Passat, Jetta, Golf, Beetle, and Audi's A3. Drivers liked them.

Except, as it turns out, VW was lying about its clean diesel cars.

Volkswagen couldn't balance performance with low pollution. So it cheated.

Since 2009, we now know, Volkswagen had been inserting intricate code in its vehicle software that tracked steering and pedal movements. When those movements suggested that the car was being tested by regulators in the laboratory for nitrogen-oxide emissions, the car automatically turned its pollution controls on. The rest of the time, the pollution controls switched off.

Regulators didn't notice this ruse for years. The problem was only uncovered by an independent group, the International Council on Clean Transportation, which wanted to investigate why there was such a discrepancy between laboratory tests and real-road performance for several of VW's diesel cars in Europe. So they worked with researchers at West Virginia University, who stuck a probe up the exhaust pipe of VW's clean diesel cars and drove them from San Diego to Seattle. (These details come from Dana Hull and Jeff Plungis' excellent Bloomberg tick-tock.)

What the researchers found was jaw-dropping. On the road, VW's Jetta was emitting 15 to 35 times as much nitrogen oxide as the allowable standard. The VW Passat was emitting 5 to 20 times as much. These cars were emitting much more pollution than they had in the labs.

Both California's air-pollution regulator and the EPA ordered Volkswagen to investigate and fix the problem in May 2014, and the company said it had worked on a software patch. Once again, the cars performed well in testing. And once again, real-world performance didn't match up. At that point, regulators started grilling Volkswagen's engineers about the

discrepancy, and the company eventually cracked, admitting the existence of these defeat devices, which had been carefully hidden in the software code. Hence the scandal.

Volkswagen hasn't explained exactly why it cheated, but outside analysts have a pretty good guess. The NOx emission controls likely degraded the cars' performance when they were switched on — the engines ran hotter, wore out more quickly, and got worse mileage. Some experts have suggested that the emission controls may have affected the cars' torque and acceleration, making them less fun to drive. (Indeed, some individual car owners have been known to disable their cars' emission controls to boost performance, though this is against the law.)

In other words, Volkswagen wasn't able to produce diesel cars that had the ideal mix of performance, fuel economy, and low pollution. (Or, at least, they couldn't do this profitably.) So they "solved" this trade-off by sacrificing cleanliness and loosening the emission controls. And they accomplished this via software designed to deceive regulators. This was wildly illegal, and they got caught.

The VW scandal exposes problems with current emission tests

Volkswagen isn't the first company to cheat on its emission tests. As Frank O'Donnell of Clean Air Watch pointed out to me, the EPA caught a number of truck manufacturers, including Caterpillar and Volvo, doing something similar back in 1998 — programming their diesel trucks to emit fewer pollutants in lab tests than they did on the road. (The trucks would slowly emit more and more NOx as they traveled longer distances at constant speed, something that labs couldn't catch.)

Part of the problem here is that regulators tend to test these vehicles in laboratory conditions, which are fairly predictable and hence easier to game. Combined with the fact that automakers are developing ever-more-elaborate software that can control and fine-tune engines, and there are ample opportunities for fraud.

EUROPEAN REGULATORS WILL SOON START REQUIRING ON-ROAD EMISSIONS TESTING

In theory, there are ways to make cheating harder. Starting with model year 2017 vehicles, European regulators are going to start requiring automakers to test their passenger cars on the road in addition to laboratory testing. That sort of regime would've made it harder for Volkswagen to do what it did. But it's also unlikely that this is the last time we'll see an automaker come up with a fiendishly clever way to cheat.

Meanwhile, the VW scandal raises another issue surrounding car regulations, as Alex Davies explains at Wired. Modern-day cars feature complex computer systems and software. And, right now, this software is protected under the 1998 Digital Millennium Copyright Act — it's illegal to fiddle with it. The ostensible rationale is to make it harder for consumers to tamper with emissions controls. But these protections also make it harder for independent researchers to scrutinize that code and identify problems like VW's little emissions trick. Some experts have proposed DMCA exemptions to allow researchers to test and evaluate these engines, but so far automakers and the EPA have resisted this. Presumably, if those exemptions had existed, Volkswagen might've been caught sooner.

Volkswagen is now facing serious consequences

At this point, Volkswagen has been caught red-handed and has to face the consequences. The company straight-up lied about its cars and exacerbated the country's air-pollution problem. (Getting a precise estimate of the health consequences here could be difficult, since it depends on where the cars were located, how much extra smog actually resulted, and so forth.)

In response, the company has pledged to stop selling 2015 and 2016 Volkswagen and Audi models equipped with clean diesel engines and will likely end up recalling the 482,000 cars now on the road to fix the software.** It's unclear how many customers will want to "fix" the problem, however, since, again, any patch might degrade gas mileage and/or performance.

Meanwhile, Volkswagen could face criminal prosecution — not to mention billions of dollars in fines, potentially. The Clean Air Act allows a fine of $37,500 per noncompliant vehicle. If the EPA really wanted to lower the hammer, that would amount to $18 billion. Again, VW's pretax net income was about $4.7 billion last year, so that would be a

crippling hit. Volkswagen is the world's biggest automaker by sales, but it's not quite as profitable as competitors like Toyota and has already struggled to gain a foothold in the US market. This could be a huge deal for the company.

It also raises questions about the future of clean diesel vehicles. Clean diesel appears to be a promising technology — in theory, these vehicles could get both excellent mileage and low emissions. But this scandal raises serious questions about how well automakers can actually achieve both goals in practice.

** For any concerned car owners, the models expected to be recalled include: The 2009-2015 VW Beetle 2.0L TDI; 2009-2015 VW Golf 2.0L TDI; 2009-2015 VW Jetta 2.0L TDI; 2009-2015 Audi A3 2.0L TDI; and 2014-2015 VW Passat 2.0L TDI.

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Ledger Gazette:

http://www.ledgergazette.com/epa-accuses-vw-of-cheating-on-emissions-tests/79148/

EPA accuses VW of cheating on emissions tests

BY JORGE WEINER ON SEPTEMBER 21, 2015 BUSINESS

VW halted sales of the models involved on Sunday and said it's cooperating with the probe and ordered its own external investigation into the issue.

"The charges here are truly appalling: that Volkswagen knowingly installed software that produced much higher smog-forming emissions from diesel vehicles in the real world than in pre-sale tests", said Frank O'Donnell, president of Clean Air Watch, a Washington-based advocacy group.

VW is to stop selling four cylinder diesel cars in the USA after the firm was found to have

rigged emissions test on up to 500,000 vehicles, it has emerged. The reality is that Volkswagen will face huge fines, rumoured to be as high as 18 billion US dollars.

German competitors BMW AG and Daimler AG said on Monday they aren't aware of a similar USA probe into their cars.

Once on the road, the cars produced nitrogen oxide pollutants at up to 40 times the legal standard.

The EPA and California authorities acted quickly after being told of the violation, German said.

Volkswagen, which recently edged out Japan's Toyota to become the world's top-selling automaker, has had a hard year, its share price having fallen from more than 250 euros amid signs of faltering sales in the US and China. He said he was "deeply sorry" for the violation of United States rules. The models include Jetta, Beetle, Golf, Passat and Audi A3.

Stefan Bratzel, director at the Center for Automotive Management, a research group, said the damage to VW's image would be as great as the financial fines.

"Our climate policy stands for itself and I think it's internationally recognized that Germany is one of the drivers on the way to (the global climate summit in) Paris", he said. The potential wonderful is $37,500 per vehicle and 482,000 autos are a part of the case, yielding a possible superb of greater than $18 billion, Giles stated on a telephone name with reporters Friday.

The EPA in November 2014 hit South Korean auto makers Hyundai Motor Co. and Kia Motors Corp. with a record $100 million penalty for overstating fuel-economy claims and forced the companies to cough up another $200 million in regulatory credits.

The cars allegedly do so with software that detects when the vehicle is undergoing emissions testing, and then turns full emissions controls on only during the test. When vehicles are being driven normally, the computer disables the emissions controls.

According to the The New York Times, this latent software within numerous Volkswagen vehicles switches on emissions control systems only during an inspection. The California Air Resources Board issued a similar letter.

"Our goal is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules and to take appropriate further action".

The feature, which the EPA called a "defeat device", masks the true emissions only during testing.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 1:57 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Washington Post:

http://www.washingtonpost.com/business/economy/vw-shares-plunge-as-epa-accuses-automaker-of-cheating/2015/09/21/3c7b2f2e-607b-11e5-8e9e-dce8a2a2a679_story.html

VW under fire amid EPA accusations it cheated on emissions tests

By Thad Moore

Volkswagen shares plunged Monday after U.S. regulators accused the German automaker of cheating on emissions tests, alleging that nearly 500,000 cars weren't meeting federal standards.

An apology Sunday from VW's chief executive did nothing to temper anxious investors, who wiped out nearly a fifth of the company's value in a single day. VW's stock closed the day Monday at 132.20 euros, down 19 percent.

The selloff comes on the heels of Environmental Protection Agency allegations that the automaker had designed software to let its diesel cars detect when they were being tested for emissions.

VW, one of the world's largest automakers, has halted sales of some vehicles in the United States and pledged to cooperate with regulators. "We at Volkswagen will do everything that must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused," Martin Winterkorn, VW's chief executive, said in a statement.

In the lab, they met standards. On the road, regulators say, they emitted nitrous oxide at up to 40 times federal standards. The software, known as a "defeat device," was installed in some 482,000 cars, spanning model years 2009 through 2015, regulators say.

The EPA and California regulators began asking questions in May 2014 after West Virginia University researchers published a study that found lab results didn't match up with road tests.

For more than a year, VW told regulators that the difference owed to "various technical issues and unexpected in-use conditions," the EPA said in a letter sent to the automaker Friday. But company officials didn't admit to the practice until earlier this month when regulators threatened not to approve its 2016 line of diesel cars.

The years-long practice could carry a hefty price tag for the automaker. The company could be fined $37,500 for each car it sold with a defeat device installed — a potential fine of $18 billion.

"The company will have to recall nearly 500,000 affected cars, which will cost it millions of dollars, and that's even before the damage to its brand and potential fines," Michael Hewson, chief market analyst at CMC Markets, told the Associated Press.

The revelation also led Consumer Reports[consumerreports.org] to pull its recommendation of VW's Jetta and Passat diesel model. (The magazine said it would reconsider its decision once the automaker introduces a fix to lower emissions.)

For his part, Winterkorn apologized Sunday, saying the company would cooperate "with transparency and urgency."

"I personally am deeply sorry that we have broken the trust of our customers and the public," he said in a statement. "We do not and will not tolerate violations of any kind of our internal rules or of the law."

From: Gong, Kristiene
Sent: Monday, September 21, 2015 11:56 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

NY Times:

http://www.nytimes.com/2015/09/22/business/international/volkswagen-shares-recall.html

Volkswagen Denied Deception to E.P.A. for Nearly a Year

By JACK EWING SEPT. 21, 2015

FRANKFURT — For nearly a year, Volkswagen officials told the Environmental Protection Agency that discrepancies between the formal air-quality tests on its diesel cars and the much higher pollution levels out on the road were the result of technical errors, not a deliberate attempt to deceive Washington officials.

But early this month, Volkswagen executives finally made a startling admission: The diesels it sold in the United States had software deliberately designed to cheat on the tests.

The company was evidently concerned that actually meeting the federal emissions standards would degrade the power of the engines, which it marketed as comparable in performance to gasoline engines. Meeting the standard would also undercut the fuel efficiency that is one of the main selling points of diesels.

The admission came only after the E.P.A. threatened to withhold approval for Volkswagen's new 2016 models, according to letters sent to company officials by the E.P.A. and California regulators.

Since news of that mass deception broke on Friday, Volkswagen has scrambled to conduct damage control, with its chief executive issuing an apology and the company saying it would not sell its 2015 and 2016 diesel cars in the United States.

But that did not stop Volkswagen shares from plummeting when trading opened in Europe on Monday. And the apology has not relieved pressure on Martin Winterkorn, the Volkswagen chief executive, whom analysts said would have tough questions to answer, seeking to know when he and other top executives at the company, which is ruled from the top with Germanic precision, were aware of the diesel deception.

Adding to pressure on Volkswagen, the German government said on Monday that it would also begin an inquiry to make sure that Volkswagen and other carmakers are complying with laws on auto emissions.

The E.P.A. disclosed the yearlong series of letters with Volkswagen as part of accusations it made against the company on Friday. The agency will require the company to recall nearly half-a-million vehicles equipped with 2-liter diesel engines dating to the 2009 model year. Volkswagen also faces fines that could run into the billions of dollars.

Volkswagen shares plunged about 20 percent on Monday, as investors registered alarm at the damage the company could suffer.

Mr. Winterkorn issued an apology on Sunday, saying the company had "broken the trust of our customers and the public."

But the sophistication of the software used to manipulate emissions tests in the United States, and extensive attempts by Volkswagen to deflect official scrutiny before admitting misconduct this month, are sure to raise questions about Mr. Winterkorn's effectiveness only months after he survived an internal power struggle.

"Either he knew, or he didn't know, which is even worse," said Ferdinand Dudenhöffer, a professor at the University of Duisburg-Essen who is a longtime Volkswagen critic. "Any politician in his situation would have to resign."

Volkswagen's supervisory board, which Mr. Winterkorn reports to, will hold a regularly scheduled meeting on Friday, and it is certain to discuss the E.P.A. action.

After being confronted last year with evidence that some diesel models did not comply with pollution standards under certain conditions, Volkswagen executives originally offered technical explanations, according to a letter of complaint sent to the company by the E.P.A. and the California Air Resources Board.

It was only on Sept. 3, according to the letters, that executives at Volkswagen of America,

the company's United States unit, admitted that cars equipped with the 2-liter diesel motors contained the software.

The software measured factors such as the position of the steering wheel, the vehicle's speed and even barometric pressure to sense when the car was being subjected to testing, the E.P.A. said. The car then configured itself to reduce emissions of nitrogen oxide, a gas that is a major contributor to smog and is linked to an array of respiratory ailments including asthma, emphysema and bronchitis, the E.P.A. said on Friday.

Volkswagen is known for being a tightly controlled, autocratic organization, raising questions about how such a sophisticated system could have been installed in nearly half a million vehicles without knowledge of top management.

The plunge in Volkswagen shares was a clear indication that investors believe that company profit and sales could suffer because of the E.P.A. accusations. However, Volkswagen is relatively immune to stock market pressure because only 12 percent of its voting shares are traded. Porsche Automobil Holding, controlled by members of the Porsche family, holds a slight majority. The state of Lower Saxony owns 20 percent and the sovereign wealth fund of Qatar owns 17 percent.

Stephan Weil, the prime minister of Lower Saxony, where Volkswagen has its headquarters and major manufacturing operations, said in a statement on Monday, "Manipulation of an emissions test is completely unacceptable and without any justification."

But Mr. Weil said consequences could be discussed only after a thorough investigation of the circumstances.

In Berlin, the government of Chancellor Angela Merkel said it would ask carmakers for information as the first step in an inquiry.

"We expect reliable information from carmakers so that the Federal Office for Vehicles can check whether similar manipulation in the exhaust systems has taken place in Germany or

Europe," Andreas Kübler, a spokesman for the Environment Ministry, told reporters in Berlin.

The European Commission has contacted Volkswagen as well as the E.P.A. for details about the accusations, a commission spokeswoman said.

"It is premature to comment on whether any specific immediate surveillance measures are also necessary in Europe and whether vehicles sold by Volkswagen in Europe are also affected," the spokeswoman said in an email. "We are taking the matter very seriously."

South Korea also planned to test Volkswagen cars to make sure they were in compliance with pollution rules, according to news reports.

More than half of all vehicles sold in Europe are diesels, which are popular because they typically offer better fuel economy than gasoline. European Union pollution rules were more favorable to diesels than United States rules, but they have been progressively tightened. The most recent standard, known as Euro 6, took effect for all new cars sold on Sept. 1.

Technology exists to reduce the amount of nitrogen oxides emitted by diesels. But the technology also tends to reduce fuel economy as well as performance. The software installed by Volkswagen on vehicles sold in the United States avoided this trade-off, which could have come as a disappointment to American customers, by scaling back pollution controls when the car was not being tested.

The accusations by the E.P.A. are a blow to Volkswagen's efforts to build up its meager market share in the United States, in part by promoting "clean diesel" technology.

The silver lining for Volkswagen, though, may be that its most profitable vehicles in the United States are Porsche and Audi cars not affected by the E.P.A. action. The cars affected are Volkswagen Golf, Jetta, Beetle and Passat models from 2009 through 2015 that are equipped with 2-liter diesel engines.

Another silver lining for Volkswagen may be that diesel powered cars account for only a tiny fraction of sales in China, which is the company's largest market.

Among Audi models, only the compact A3 is affected in the United States. The A3 accounted for less than a fifth of the 111,000 vehicles that Audi sold in the United States from January through August, and only a fraction of those A3s would have been equipped with diesels.

The E.P.A. said on Friday that Volkswagen would be required to recall the affected vehicles for repairs to make them compliant with smog regulations. Car owners would not have to pay for the repairs. Many owners may not bother, though, because the changes are likely to reduce fuel consumption and performance.

John Schilling, a Volkswagen spokesman, said on Sunday that the company would stop selling 2015 and 2016 Volkswagen and Audi models equipped with the 2-liter diesel engines, which the company had marketed as "clean diesel." The company will also stop selling used cars that have the engines, Mr. Schilling said.

He said he did not know how many models would be stuck on dealer lots as a result of the decision. This month, Volkswagen had said that 23 percent of new cars sold in August in the United States were diesels, or 7,400 vehicles. Some diesels, such as those used in Volkswagen S.U.V.s, are not affected by the E.P.A. action.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:54 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

AP (via US News & World Report)

http://www.usnews.com/news/business/articles/2015/09/21/vw-stock-crashes-after-admitting-it-rigged-us-emission-tests

Faulty Tests Cost VW Billions

By FRANK JORDANS and PAN PYLAS, Associated Press

BERLIN (AP) — Around 15 billion euros ($16.9 billion) was wiped off the market value of Volkswagen AG on Monday following revelations that the German carmaker rigged U.S. emissions tests for about 500,000 diesel cars.

By midday trading in Frankfurt, Volkswagen's share price was 19.3 percent lower at a three-year low of 130.20 euros. Its dramatic fall weighed heavily on Germany's main stock index, the DAX, which underperformed its peers in Europe with a 0.6 percent decline.

Volkswagen's market woes Monday follow a weekend that saw the company's reputation for probity seriously damaged by revelations from the Environmental Protection Agency in the U.S. that it had skirted clean air rules. All told, the EPA indicated that VW faces fines that could run up to more than $18 billion.

The EPA said VW used a device programmed to detect when the cars are undergoing official emissions testing. The software device then turns off the emissions controls during normal driving situations, allowing the cars to emit more than the legal limit of pollutants.

Volkswagen marketed the diesel-powered cars, which account for about 25 percent of sales, as being better for the environment. The cars, built in the last seven years, include the Audi A3, VW Jetta, Beetle, Golf and Passat models.

"The company will have to recall nearly 500,000 affected cars, which will cost it millions of dollars, and that's even before the damage to its brand and potential fines," said Michael Hewson, chief market analyst at CMC Markets.

The agency has ordered VW to fix the cars at its own expense but said car owners do not need to take any immediate action. The EPA insisted that the violations do not pose any safety hazard and said the cars remain legal to drive and sell while Volkswagen comes up with a plan to recall and repair them. However, it said the cars posed a threat to public health.

The EPA also indicated the scale of the fines that could be imposed on VW. It said the carmaker could be hit up to $37,500 per vehicle for the violations — a total of more than $18 billion. The California Air Resources Board is also investigating.

Volkswagen has had a difficult year, its share price having fallen from over 250 euros amid signs of faltering sales in the U.S. and China.

VW edged out Toyota to become the world's top-selling automaker the first half of 2015. But a hit to its reputation from the emissions revelations could hamper its efforts at a sales rebound in the U.S.

If other regulatory authorities decide VW has a case to answer, then the carmaker faces the potential for even bigger fines.

"The news so far revolves around the U.S. impact, but if European investigators become interested the potential penalties could multiply very quickly," said Chris Beauchamp, senior market analyst at IG.

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Washington Examiner:

http://www.washingtonexaminer.com/volkswagen-sorry-promises-probe-on-epa-violations/article/2572497

Volkswagen 'sorry,' promises probe on EPA violations

By DANIEL CHAITIN (@DANIELCHAITIN7) • 9/20/15 3:23 PM

Volkswagen apologized Sunday following allegations by the Environmental Protection Agency and the state of California that hundreds of thousands of diesel cars made by the German automaker are breaking emissions laws in the United States.

"The Board of Management at Volkswagen AG takes these findings very seriously," wrote Martin Winterkorn, CEO of Volkswagen. "I personally am deeply sorry that we have broken the trust of our customers and the public. We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case. Volkswagen has ordered an external investigation of this matter."

On Friday, the EPA and California charged Volkswagen with willfully installing software in its 4-cylinder diesel cars that would allow cars to bypass emission standards. The cars cited for violations include signature Volkswagen cars manufactured between 2009 and 2015, including the Jetta, Passat, Beetle and Golf, as well as the A3 from Audi, Volkswagen's luxury line.

All together, about 482,000 diesel passenger cars sold in the United States since 2008 are included in the allegations.

The statement promises that Volkswagen will "re-establish trust" it may have lost and that the company will reverse any damage done.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," Winterkorn added.

The EPA issued a notice of violation to Volkswagen, while the state of California sent an In-Use Compliance letter. Both the EPA and the California Air Resources Board are conducting separate investigations into the alleged misbehavior.

Recalls are likely, and the combined fines could add up to $18 billion if the result of the investigations support the allegations.

The EPA alleges that the Volkswagen cars are fitted with software to trick emission testers, but that under normal operation emit nitrogen oxides at up to 40 times the standard. Under the Clean Air Act, such an instrument is classified as a "defeat device."

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for the Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

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The Epoch Times:

http://www.theepochtimes.com/n3/1755607-volkswagen-circumvents-epa-rule-its-not-the-first-time/

Volkswagen Skirts EPA Rules; It's Not the First Time

By Arleen Richards

Volkswagen Group of America admitted to sidestepping clean air standards after the EPA and California's clean air watchdog confronted the German automaker with evidence of high in-use emissions from light-duty diesels.

On Friday, Sept. 18, the EPA slapped VW with a notice of violation for using sophisticated software to circumvent national emissions standards. The software, which the EPA calls a "defeat device," is designed to implement full emissions control systems when the car is undergoing state emissions testing. During normal driving, the emissions control is turned off, permitting the significantly harmful diesel fumes to be expelled—40 times more than allowed under the Clean Air Act. VW and the California Air Resources Board (CARB) have both initiated investigations.

Volkswagen CEO Dr. Martin Winterkorn, on Sunday, apologized for breaking the public's trust and vowed to cooperate fully with agency investigations.

He ordered an internal investigation, saying in a statement, "We do not and will not tolerate violations of any kind of our internal rules or of the law."

But this episode is not the first time the EPA or CARB has had run-ins with VW. In the past, both agencies charged VW with similar violations, which resulted in penalties.

Defective Oxygen Sensors

VW previously failed to report its discovery of emission defects in at least 329,000 of its 1999, 2000, and 2001 Golf, Jetta, and New Beetle vehicles.

In May 2001, after conducting a random test, the EPA identified a problem with tailpipe emissions in the 1999 model vehicles caused by a failed oxygen sensor. It turns out, VW knew about the problem for a year already—since it had received numerous warranty claims associated with cracked oxygen sensors—but failed to report it. According to the Clean Air Act, any emission-related defect found in 25 vehicles or engines of the same model year has to be reported within 15 days.

VW spent $26 million in January 2002 to recall all the vehicles and replace or repair the part. Another estimated $660,000 was spent on an enhanced defect tracking system.

The EPA finally settled its case with VW in 2005, penalizing the delinquent car maker $1.1 million.

The state of California has been working closely with the EPA in testing VW cars and issued a separate notice of violation to VW in the current case.

California has been a leader in clean energy investments and set the stage in 2006 for transitioning to a sustainable, low-carbon future with the passage of AB 32, a law requiring sharp reduction in greenhouse gases. Since then, several legislative initiatives have been implemented to build the next generation of clean, fuel-efficient cars.

The CARB implements the state's vehicle regulations through a vigorous certification process, as well as compliance and enforcement programs. It regularly tests vehicles to ensure compliance with air quality standards.

In 2004, VW settled a case with CARB for $552,500 for selling cars in California that had not been properly certified. VW admitted to selling 84 new 2002 vehicles from several retail locations throughout the state, attributed to an error in its electronic ordering system.

The EPA is expected to compel VW to issue a recall notice in order to remedy the current emissions problem, which could take up to a year after identifying the appropriate corrective action and a recall plan.

Jalopnik:

http://jalopnik.com/volkswagen-tells-dealers-to-halt-sales-of-new-tdi-cars-1731923302

Volkswagen Tells Dealers To Halt Sales Of New TDI Cars Amid Diesel Cheating Scandal

Alanis King

Following the government investigation of Volkswagen's diesel emissions, The Detroit News reports the automaker ordered its U.S. dealerships to halt sales of new 2016 and remaining 2015 TDI car models with 2.0-liter diesel engines.

According to the Environmental Protection Agency and California Air Resources Board, VW dodged federal emissions requirements for some 482,000 of its diesel cars — including the Passat, Jetta, Golf, Beetle, SportWagens and Audi A3 — manufactured from 2009 to 2015. The models contain a "defeat device" which exists to detect when the car is under testing conditions, allowing for it to activate the full emissions-control systems only in those circumstances.

In other words, environmental officials say that the street cars are emitting between 10 and 40 times the amount of allowable nitrogen oxide pollution, which is not only illegal but harmful to both the environment and public.

The EPA is taking action on 2016 diesel models. Christopher Grundler, director of the EPA Office of Transportation of Air Quality, said that the government will not grant VW a "certificate of conformity" to sell the 2016 models with 2.0-liter diesel engines, meaning they cannot be sold.

VW dealers have been waiting for the 2016 models to replenish showrooms. Most U.S. VW dealers don't have any remaining 2015 diesel cars to sell.

VW is barred from selling 2016 model vehicles with the 2.0 liter diesel engine until "they get answers to the questions of how these vehicles are being operated. Volkswagen couldn't explain why we're getting these excess emissions," Grundler said.

Meanwhile, whatever 2015 models remain on lots have also been ordered not to be sold. As Automotive News notes, four-cylinder TDI models account for 20 to 25 percent of VW's U.S. sales, so this is going to hurt.

In addition, VW has ordered an outside investigation to find out what happened and "reverse the damage this has caused," CEO Martin Winterkorn said in an apologetic statement.

According to the EPA, the agency is now checking to see if other automakers are bypassing the laws on diesel engines as well.

While no official recall is underway just yet, the News reports:

EPA said VW violated federal law and, in theory, could face fines of up to $18 billion — $37,500 per vehicle — as well as criminal prosecution. Both agencies issued notices of non-compliance to VW Friday, a step necessary before ordering a recall.

The EPA will not take action to stop VW owners from driving their personal cars until a solution is made available, but VW did remove its "clean diesel" advertisements from YouTube and television.

CBC News (Canada):

http://www.cbc.ca/news/business/volkswagen-emissions-rigging-1.3236548

Volkswagen shares plunge on emissions rigging scandal

Consumer Reports suspends 'recommended' rating for Jetta and Passat diesels

CBC News Posted: Sep 21, 2015 9:00 AM ET Last Updated: Sep 21, 2015 9:00 AM ET

Volkswagen's CEO apologized but investors were not in a forgiving mood as the company's stock plunged almost 20 per cent Monday following revelations late last week that the automaker had rigged emissions tests for almost 500,000 diesel cars in the U.S.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn said in a weekend statement.

On Friday, the U.S. Environmental Protection Agency (EPA) revealed that half a million diesel-powered VWs had been programmed to bypass emission controls except during emissions tests. The cars include the Audi A3, VW Jetta, Beetle, Golf and Passat models made in the last seven years.

The EPA ordered VW to fix the cars and VW said it would co-operate with regulators. But the damage to the automaker's image is nothing less than catastrophic.

VW had marketed its diesel-powered cars as being better for the environment. The Associated Press reports, citing an anonymous source with knowledge of the matter, that VW has told dealers to stop selling its 2015 diesel cars with 2.0-litre engines.

The EPA said the VW cars under investigation seemed to pass emissions tests, but in the real world, were actually emitting up to 40 times the national standard for nitrogen oxide, which is linked to asthma and lung illnesses.

Consumer Reports announced it would remove its "recommended" rating from the Jetta and Passat diesels until it can retest the vehicles.

VW could face fines of up to $18 billion US, according to the EPA.

Volkswagen shares plunged 19.4 per cent in Monday trading in Germany, chopping $21 billion Cdn from the market value of the company.

"The company will have to recall nearly 500,000 affected cars, which will cost it millions of dollars, and that's even before the damage to its brand and potential fines," said Michael Hewson, chief market analyst at CMC Markets.

Diesel-powered models account for about a quarter of VW's sales.

Impact in Canada unclear

At this point, it isn't clear what the revelations mean for owners of VW diesels in Canada. Volkswagen Canada told CBC News on Friday that it first learned of the EPA action earlier that morning. It said it would co-operate with Environment Canada "to understand the implications for the Canadian market and what actions, if any, may be required in Canada."

Environment Canada, for its part, said it was in talks with the EPA "to further examine this issue and assess potential implications for Canada." Environment Canada also said it collaborates on emissions verification activities with the U.S. EPA "to ensure our common environmental outcomes are achieved," and pointed out that its emissions standards are aligned with U.S. standards.

The EPA and Environment Canada both stressed that the effectiveness of a vehicle's air pollutant control devices is not a safety issue. The cars remain legal to drive.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:35 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

NY Times:

http://www.nytimes.com/2015/09/21/business/international/volkswagen-chief-apologizes-for-breach-of-trust-after-recall.html?_r=0

Volkswagen to Stop Sales of Diesel Cars Involved in Recall

By JACK EWING and CORAL DAVENPORTSEPT. 20, 2015

FRANKFURT — Volkswagen said on Sunday that it would halt sales of cars in the United States equipped with the kind of diesel motors that had led regulators to accuse the German company of illegally installing software to evade standards for reducing smog.

John Schilling, a Volkswagen spokesman, said that the company would stop selling 2015 and 2016 Volkswagen and Audi models equipped with 4-cylinder turbo diesel engines, which the company has marketed as "clean diesel." The company will also stop selling used cars that have the engines, Mr. Schilling said.

He said he did not know how many models would be stuck on dealer lots as a result of the decision. Earlier this month, Volkswagen had said that 23 percent of new cars sold in August in the United States were diesels, or 7,400 vehicles.

The confirmation of the halt in sales came on the same day that Martin Winterkorn, the chief executive of Volkswagen, apologized for conduct that prompted the Environmental Protection Agency to order Volkswagen to recall nearly half a million vehicles.

An employee on the Audi A3 limousine. The recall involves four-cylinder Volkswagen and Audi vehicles from the model years 2009 to 2015. Credit Szilard Koszticsak/European Pressphoto Agency

Volkswagen could face billions of dollars in fines for what the E.P.A. said was a deliberate attempt to evade rules on emissions. The decision to stop sales was first reported by The

Wall Street Journal.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Mr. Winterkorn said in a statement.

He said the company would "cooperate fully" with the authorities and order its own independent investigation into the accusations.

In his statement, Mr. Winterkorn did not contest assertions by the E.P.A. that Volkswagen sold cars equipped with software that could detect when periodic state government emissions testing was taking place.

Only during such tests are the cars' full emissions control systems turned on. During normal driving situations, the controls were turned off, allowing the cars to spew as much as 40 times the pollution allowed under the Clean Air Act, the E.P.A. said.

Diesel-driven cars have enjoyed something of a renaissance in recent years, shedding much of their old stigma for being dirty, clanky and sluggish to drive, said Karl Brauer, an analyst at Kelley Blue Book. And in the United States, he said, Volkswagen has clearly led the pack — offering diesel vehicles that performed just like their gasoline counterparts.

"Now, we have to wonder if the technology really advanced as far as we thought at VW," Mr. Brauer said. "They must have had a problem making it work in a way that delivered truly clean diesel. At least clean enough to meet the regulations."

Mr. Brauer said the higher nitrous oxide emissions probably allowed better drivability. Fuel economy also improves with more nitrous emissions, and engines can run cooler, and thus wear out more slowly.

"They must have had a mix of performance, economy and durability that they liked, but

realized they couldn't achieve that and still get the emissions," he said.

Diesels in particular are known — and marketed — these days as having tremendous torque, or low-end thrust from a stop. If achieving the required emissions affected the torque, making it anemic, then "drivers are going to scratch their heads, thinking, isn't this why I got a diesel?" Mr. Brauer said.

Volkswagen was going through a difficult period even before the accusations became public on Friday. Mr. Winterkorn recently survived a power struggle with the chairman of Volkswagen's supervisory board, Ferdinand Piëch, a scion of the Porsche family who dominated the company for more than two decades before resigning in April.

Following Mr. Piëch's departure, some analysts have raised questions about whether Mr. Winterkorn would be strong enough to hold together the sprawling Volkswagen empire, which also includes Audi and Bentley luxury cars, Porsche and Lamborghini sports cars, Scania and MAN heavy trucks, and Ducati motorcycles.

Although Volkswagen recently surpassed Toyota as the world's biggest automaker measured by the number of cars sold, it is significantly less profitable than its Japanese rival and far weaker in the United States market.

A push by Volkswagen to increase sales in the United States, which included building a factory in Chattanooga, Tenn., to produce Passat sedans, has fallen short.

"For Volkswagen, it's a huge scandal," said Ferdinand Dudenhöffer, a professor at the University of Duisburg-Essen, who follows the automobile industry. "The timing is extremely unfortunate."

Professor Dudenhöffer said the case could damage all German automakers, which have tried to build acceptance in the United States for diesel engines, a sector in which they believe they have a technological lead.

Until recently, Professor Dudenhöffer said, the United States applied stricter standards to diesel engines than those applied by European regulators. But the European authorities, concerned about the health effects of diesel pollution, have tightened standards, prompting complaints from the auto industry.

Professor Dudenhöffer said that as a result of the E.P.A. action, Mr. Winterkorn could come under pressure to resign.

"Winterkorn was already damaged," Professor Dudenhöffer said. "Now there is an accusation of illegal behavior. This story is not over."

E.P.A. officials issued the car company a notice of violation and said it had admitted to the use of a so-called defeat device.

The recall involves 4-cylinder Volkswagen and Audi vehicles from the model years 2009 to 2015.

The software was designed to conceal the cars' emission of nitrogen oxide, a pollutant that contributes to the creation of ozone and smog, which are linked to a range of health problems, including asthma attacks, other respiratory diseases and premature death.

Disengaging the pollution controls on a diesel-fueled car can yield better performance, including increased torque and acceleration.

California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

Over the next year, E.P.A. officials said, owners of the affected vehicles should expect to

receive recall notices from Volkswagen, including information about how to get their cars repaired at no cost to them. The recall covers roughly 482,000 diesel passenger cars sold in the United States since 2009.

Affected diesel models include the 2009-15 Volkswagen Jetta, 2009-15 Beetle, 2009-15 Golf, 2014-15 Passat and 2009-15 Audi A3.

The American investigation could ultimately result in fines or penalties for the company. Under the terms of the Clean Air Act, the Justice Department could impose fines of as much as $37,500 for each recalled vehicle, for a possible total penalty of as much as $18 billion.

The notice of violation came days after the company promoted plans at the Frankfurt International Motor Show to introduce 20 plug-in hybrid or all-electric vehicles by 2020 as part of a campaign to reduce vehicle emissions.

Mr. Winterkorn said in his statement on Sunday that Volkswagen would "do everything necessary in order to reverse the damage this has caused."

"This matter has first priority for me, personally," he said, "and for our entire board of management."

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Financial Times:

http://www.ft.com/intl/cms/s/0/c4f4745c-5f98-11e5-9846-de406ccb37f2.html#axzz3mNpq5JFM

VW apologises for cheating US car exhaust emissions tests

Andy Sharman in London

The chief executive of Volkswagen has apologised and ordered an external investigation into findings that the carmaker cheated on US emissions tests to make its vehicles appear less polluting.

In a statement on Sunday, Martin Winterkorn, chief executive of the German carmaker, said the board of management took the findings "very seriously".

He added: "I personally am deeply sorry that we have broken the trust of our customers and the public. We will co-operate fully with the responsible agencies, with transparency and urgency, to clearly, openly and completely establish all of the facts of this case."

The Environmental Protection Agency on Friday said diesel variants of several VW and Audi models sold in the US over six years — including the VW Passat, Beetle and Audi A3 — had been fitted with sophisticated algorithms designed to deceive the laboratory testing regime.

The authorities ordered VW to recall 482,000 cars because of the use of so-called defeat devices — which use software to detect when the car is being tested and runs treatments to reduce nitrogen oxides. Once out on the road, the cars were discovered to produce pollutants up to 40 times the legal limits.

The discovery leaves the German carmaker — which has admitted to using the defeat devices — potentially facing billions of dollars in fines and warranty costs, possible criminal charges for executives and class-action lawsuits from US drivers.

Mr Winterkorn did not say who would be carrying out the external investigation, and the company declined to provide further details.

It was Mr Winterkorn's first formal statement on an issue that also threatens to seriously undermine its attempts to turnround its sputtering performance in the US.

Max Warburton, analyst at Bernstein Research, said: "The best case for VW is probably still a multibillion-dollar fine, pariah status in the US with government — and possibly consumers — [and] damage to its leading position in diesel in the US."

VW now has to initiate a process to fix the cars' emissions systems, though the EPA has said the violations do not present a safety hazard and the vehicles remain legal to drive and resell. Owners of cars of models covering the 2009-2015 period do not need to take any action, the agency said.

I personally am deeply sorry that we have broken the trust of our customers and the public. We will co-operate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case

- Martin Winterkorn, VW chief

In addition to the costs of the recall campaign, VW could theoretically also face fines of up to $37,500 per vehicle — a total of more than $18bn — though analysts have said VW is likely to face a much lower penalty.

The case is a rare but not unique example of this type of manipulation by the motor industry. In 1998, a group of truckmakers including Navistar, Renault and Volvo paid more than $1bn to resolve claims they installed defeat devices on heavy duty diesel engines. These devices allowed an engine to pass the emissions test, but then turn off emission controls when on the road, the EPA said at the time.

The EPA has been active in the past year, securing a record $300m settlement with Hyundai and Kia over claims the Korean affiliates overstated the fuel economy of their cars.

The Guardian:

http://www.theguardian.com/business/2015/sep/20/vw-software-scandal-chief-apologises-for-breaking-public-trust

VW software scandal: chief apologises for breaking public trust

Martin Winterkorn orders external investigation after US regulators found cars gave inaccurate data on toxic emissions

Volkswagen has ordered an external investigation after US regulators found that the carmaker designed software for close to half a million diesel cars that gave false emissions data, its CEO said, adding he was "deeply sorry" for the violation of US rules.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn said in a statement published on Sunday by the carmaker on Sunday. "Volkswagen has ordered an external investigation of this matter."

The US Environmental Protection Agency (EPA) said on Friday the software deceived regulators measuring toxic emissions, adding that Volkswagen could face fines of up to $18bn (£11.5bn) as a result. The carmaker could face penalties of $37,500 for each car not in compliance with clean air rules. The diesel-powered models from 2009-2015 are the VW Jetta, Beetle and Golf, the Passat model from 2014-15, and the Audi A3 from 2009 to 2015.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," said Winterkorn, adding the company was fully co-operating with the relevant agencies. He gave no details on who would carry out the external investigation.

Cynthia Giles, an enforcement officer at the EPA, said on Friday that the cars in question "contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test".

"VW was concealing the facts from the EPA, the state of California and from consumers.

We expected better from VW," she said. "Using a defeat device in cars to evade clean air standards is illegal and a threat to public health."

The EPA accused Volkswagen of using the device in 482,000 four-cyclinder Volkswagen and Audi diesel cars in the US since 2008. VW must recall all the cars, remove the defeat device and improve the cars' NOx emissions, which creates smog and has been linked to increased asthma attacks and other respiratory illnesses.

The feature, which the EPA called a defeat device, masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, said Giles.

Volkswagen suspended sales of cars containing the company's four-cylinder turbo direct injection (TDI) engine on Friday in light of the investigation. The "clean diesel" engine is commonly used in models including VW's Beetle, Golf, Jetta, Passat and the A3 luxury compact made by VW-owned Audi.

Richard Corey, executive officer of the California Air Resources Board (Carb), said on Friday: "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The EPA and Carb discovered the defeat device software following independent analysis by researchers at West Virginia University, who were promoted into action by the International Council on Clean Technology, an NGO.

When confronted with the EPA and Carb's evidence, VW admitted that its cars were fitted with the defeat device.

The crackdown on Volkswagen comes as the Obama administration is attempting to cut air pollution from an array of sources, including the vehicle industry, power plants and oil and

natural-gas providers. The EPA set new carbon rules for big trucks earlier this year and has told all vehicle makers they must sell light vehicles averaging 54.5 miles a gallon by 2025.

In Europe, new laws have forced manufacturers to test their cars under real world conditions and not in laboratories, helping to reduce unrealistic claims about emissions. By 2017 all new cars will have to be more stringently tested, effectively ending an era when car makers could exaggerate the performance of their machines.

UK car industry group the SMMT claims that, because of European legislation to cut tailpipe pollution, Britain's air quality is better now than it has been for centuries.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:26 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

The Hill:

http://thehill.com/policy/energy-environment/254323-volkswagen-head-apologizes-for-epa-accusations

Volkswagen head apologizes after EPA accusations

By Timothy Cama - 09/20/15 01:28 PM EDT

The head of German automaker Volkswagen Group apologized Sunday after allegations surfaced that his company deliberately tried to evade United States air pollution laws.

Martin Winterkorn, the company's chief executive officer, said he was "deeply sorry" for violating the trust of customers and the public, and said that Volkswagen had ordered an

external investigation into the matter.

Volkswagen faces up to $18 billion in fines for the violations under the Clean Air Act, under which the Environmental Protection Agency (EPA) sets air pollution rules for motor vehicles.

"We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case," Winterkorn said in a Sunday statement

"We do not and will not tolerate violations of any kind of our internal rules or of the law."

Winterkorn stopped short of admitting to the EPA's allegations.

On Friday, the EPA said it had discovered that about 482,000 diesel vehicles sold by VW and its subsidiary Audi in the United States had "defeat devices" that detect when the vehicle is undergoing an EPA emissions test and turn on equipment that controls output of nitrogen oxides to acceptable levels.

At all other times, the EPA said, the vehicles emitted more pollutants, sometimes exceeding allowable volumes by 40 times.

The agency has not yet officially charged Volkswagen with any civil or criminal penalties, nor did it order any recalls of the affected vehicles. California, which has its own emissions regulations, is also accusing the company of violating air rules.

"We at Volkswagen will do everything that must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused," Winterkorn said, adding that the issue is the top priority for him and the entire management team.

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Reuters:

http://www.reuters.com/article/2015/09/21/usa-volkswagen-idUSL1N11R0L020150921

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

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Christian Post:

http://www.christianpost.com/news/volkswagen-to-recall-almost-500000-cars-in-the-us-over-epa-violation-145778/

Volkswagen to recall almost 500,000 cars in the US over EPA violation

BY LORRAINE CABALLERO , CHRISTIAN POST CONTRIBUTOR

Volkswagen will recall almost 500,000 vehicles released from 2009 to 2015 in the United States after the carmaker allegedly violated the law by using illegal software, which helped it go past environmental restrictions.

The Environmental Protection Agency (EPA) said Volkswagen broke the law by installing a "defeat device" in Volkswagen and Audi units with four-cylinder turbo diesel engines released from the year 2009 to 2015. Under normal driving conditions, the emission control devices installed in the said cars worked with reduced efficacy, according to the Dispatch Times.

In the wake of the violation, Volkswagen chief executive Martin Winterkorn delivered a statement apologizing to their customers and vowing to cooperate with EPA's investigation. However, he did not deny the allegations regarding the illegal software, the International Business Times reports.

"I personally am deeply sorry that we have broken the trust of our customers and the public," said Winterkorn in his statement.

Because of the notice of violation from the EPA, Volkswagen is now facing penalties amounting to more than $18 billion, or around $37,500 per unit, based on the U.S.A. federal Clean Air Act. EPA and CARB discovered the illegal software after researchers at the West Virginia University conducted an independent study in cooperation with the global Council on Clean Transportation, the report adds.

Volkswagen has been struggling to sell cars in the United States because of the rising cases of asthma and other respiratory illnesses caused by air pollutants. The diesel vehicles affected by the recall were being counted on to pull up the company's sales in the United States.

Based on the findings of the EPA, Volkswagen had included a certain algorithm in the cars' emissions software that could detect when an emission test is being conducted.

Owners of the diesel cars affected by the recall will be notified by Volkswagen by next year, EPA said. Until Consumer Reports can "retest" the said cars, the recommended rating for the Passat, Jetta, Golf, Beetle, and Audi A3 luxury compact will remain on hold, the report relays.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:14 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert

Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

AP (via Boston Globe):

https://www.bostonglobe.com/business/2015/09/20/chief-sorry-after-epa-says-firm-skirted-clean-air-law/3NNTCf2cVxUI1qYNBfMe7L/story.html

Volkswagen chief apologizes for rigging tests of emissions

By Paul Wiseman and Tom Krisher ASSOCIATED PRESS SEPTEMBER 21, 2015

WASHINGTON — The chief executive of Volkswagen apologized Sunday and VW customers said they felt duped after the Environmental Protection Agency revealed that the German automaker had skirted clean air rules by rigging emissions tests for about 500,000 diesel cars.

''I personally am deeply sorry that we have broken the trust of our customers and the public,'' Volkswagen chief Martin Winterkorn said in a statement. He said VW has ordered an investigation and promised that the company would cooperate with regulators.

On Friday, the EPA said VW used software that allowed its diesel cars to release fewer smog-causing pollutants during tests than in real-world driving conditions.

The cars, built in the last seven years, include the Audi A3, VW Jetta, Beetle, Golf, and Passat models. The agency ordered VW to fix the cars at its own expense. VW also faces fines that could add up to billions of dollars.

VW edged out Toyota to become the world's top-selling automaker in the first half of 2015. But a hit to its reputation from the emissions revelations could hamper its efforts at a sales rebound in the United States. Between 2013 and 2014, VW sales plummeted 10 percent, even as overall industry sales rose 6 percent. US buyers want SUVs, and Volkswagen

doesn't have competitive vehicles to offer them.

The magazine Consumer Reports almost immediately suspended its ''recommended'' rating on the Jetta and Passat diesels until it can get recall repairs and retest the cars.

Volkswagen marketed the diesel-powered cars, which account for about 25 percent of its sales, as being better for the environment. After the EPA acted, VW withdrew ads for its diesel cars from Youtube.com and asked dealers to stop selling 2015 diesel cars with 2.0-liter engines, according to a person familiar with the matter.

Some VW customers were furious.

Zeeshan Shah, 39, of Fulton, Md., said that he bought a Volkswagen Diesel Passat 2015 in July after he totaled his Jetta two years ago.

''The selling point" for the Diesel Passat was that the technology was so good, he said. Now, Shah plans to return the car back to the dealer to have it examined and doesn't want to buy another Volkswagen. ''Once they cheat you on this issue, what other issues can they cheat you on?'' he said. ''You don't trust them.''

John German, senior fellow at the International Council on Clean Transportation, the group that blew the whistle on VW, said it didn't expect to find any violators when it contracted with West Virginia University to test cars with diesel engines.

The council, a research group that helps governments write regulations, did the US tests in an effort to show that automakers were complying with US nitrogen oxide emissions standards, which are stricter than in other countries, he said.

The EPA said VW faces fines of up to $37,500 per vehicle for the violations, a total of more than $18 billion.

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WSJ:

http://www.wsj.com/articles/volkswagen-ceo-apologizes-after-epa-accusations-1442754877

Volkswagen Halts U.S. Sales of Certain Diesel Cars

Auto maker also begins external probe after EPA accuses company of dodging emissions rules

By WILLIAM BOSTON, AMY HARDER and MIKE SPECTOR

Updated Sept. 20, 2015 8:57 p.m. ET

Volkswagen AG's crisis over allegedly cheating on U.S. emissions tests deepened, with the German auto maker halting American sales of popular diesel-powered cars and issuing a sweeping apology for violating customers' trust.

It also launched an external investigation. Shares in the company slumped more than 20% in early trading Monday in response to the crisis.

The company could face billions of dollars in fines and the crisis could further weaken Volkswagen Chief Executive Martin Winterkorn's position. He narrowly survived efforts by a major shareholder to oust him earlier this year and was passed over for the chairman's job, the company's top post, this month.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Mr. Winterkorn said in a statement issued by the company on Sunday, adding that VW is cooperating with authorities and has commissioned an external probe.

The U.S. is crucial in Volkswagen's efforts to become the world's leading auto maker by sales. The German company has built its campaign to grow in the U.S. market on a promise that its clean-diesel engines deliver better performance and low emissions. It is neck-and-neck with reigning sales leader Toyota Motor Corp. and overtook the Japanese car maker during the first half of this year. But the emissions test probes could stall its progress.

Even prior to the emissions issue, the auto maker's namesake Volkswagen brand has been battling declining sales in the U.S. market. And Audi AG, its luxury car maker, is finding it hard to catch up in the U.S. with rivals BMW AG and Daimler AG, which makes Mercedes-Benz vehicles.

On Friday, the U.S. Environmental Protection Agency and the California Air Resources Board alleged that Volkswagen used software, dubbed a "defeat device," in the cars to make diesel-powered engines appear to have lower levels of emissions than they actually did.

About 482,000 Volkswagen diesel-powered cars were affected.

The EPA probe could force Volkswagen and its Audi unit to recall thousands of vehicles that contain the company's "clean diesel" engines. The four-cylinder 2.0-liter turbo direct injection, or TDI, engine is commonly found in Volkswagen's Passat, Jetta, Golf, Beetle and in Audi's A3 luxury compact model.

A Volkswagen spokesman on Sunday said the auto maker halted the sale of all 2015 and 2016 models containing the four-cylinder 2.0 liter TDI engine. The EPA investigation affects cars sold since 2008. The company hasn't issued a recall, the spokesman said.

Realization that Volkswagen may have cheated to get better emissions results could undermine its U.S. recovery and further weaken its shares, which are down 37% from their peak on March 16, said analysts.

"There is no way to put an optimistic spin on this—this is really serious," said Max

Warburton, an analyst with Bernstein Research. "The best case for VW is probably still a multi-billion dollar fine."

Consumer Reports, an influential magazine when it comes to car reviews, last week suspended "recommended" ratings on the auto maker's Jetta and Passat diesel-engine models after the EPA disclosed its allegations. Consumer Reports said the recommendations would be suspended until it can retest the vehicles once they are repaired. The magazine said it would then assess whether the cars' fuel economy worsened.

A production line at a Volkswagen plant in Wolfsburg, Germany. ENLARGE

A production line at a Volkswagen plant in Wolfsburg, Germany. PHOTO: REUTERS

Laurie Cleveland, a 54-year-old English teacher from Lowville, N.Y., said she bought a new 2015 VW Passat TDI over the Labor Day weekend. She isn't sure what to do now. She said it is her fourth Volkswagen diesel car since 2006.

"I feel like I've been deceived," she said. "I'm a person who likes to be environmentally friendly," she added.

Mr. Winterkorn on Sunday vowed to do "everything necessary" to regain public trust in the company.

"We do not and will not tolerate violation of any kind of our internal rules or of the law," he said. "This matter has first priority for me."

U.S. officials said Volkswagen violated two parts of the federal Clean Air Act and could face fines of as much as $37,500 per car, or more than $18 billion. It remained unclear whether the government would seek such an onerous penalty.

The EPA in November 2014 hit South Korean auto makers Hyundai Motor Co. and Kia Motors Corp. with a record $100 million penalty for overstating fuel-economy claims and

forced the companies to cough up another $200 million in regulatory credits.

The EPA has said the vehicles remain safe and legal to drive. The agency is working with the Justice Department and an investigation is continuing.

Officials alleged that Volkswagen used software that activates full emissions controls only during testing but then reduces their effectiveness during normal driving. The result is that cars can emit nitrogen oxides at up to 40 times the allowable standard, the agency said. Diesel-powered cars are a small part of overall U.S. car and light-truck sales.

Experts say that the software enables cars to get better fuel economy at the expense of higher nitrogen-oxide emissions, which was likely one reason VW was using them, according to Margo Oge, who recently retired as director of the EPA's Office of Transportation and Air Quality after more than 30 years at the agency.

Volkswagen's apparent motivations on the emissions tests were unclear. An EPA spokeswoman has said it would be "premature to speculate on why VW did this."

A Volkswagen spokesman in Wolfsburg, Germany, on Sunday said, "We are now in the investigation phase and have no comment beyond what is in the statement that we published today."

California is separately investigating the auto maker.

The International Council on Clean Transportation, a nonprofit research organization that works with governments to cut air pollution from mobile sources, and West Virginia University researchers uncovered Volkswagen's alleged use of defeat devices in research and testing over the last couple of years.

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Reuters:

http://www.reuters.com/article/2015/09/20/us-usa-volkswagen-ceo-idUSKCN0RK0IK20150920

Volkswagen to halt U.S. sales of some 2015 diesel cars

FRANKFURT/HAMBURG | BY CHRISTOPH STEITZ AND JAN SCHWARTZ

Volkswagen (VOWG_p.DE) told U.S. dealers to halt sales of some 2015 diesel cars after regulators found software it designed for the affected vehicles gave false emissions data, the company said Sunday, announcing it had launched an investigation.

In a statement published by the carmaker on Sunday, Chief Executive Officer Martin Winterkorn said, "I personally am deeply sorry that we have broken the trust of our customers.

"Volkswagen has ordered an external investigation of this matter," he said.

The U.S. Environmental Protection Agency (EPA) said on Friday the software deceived regulators measuring toxic emissions, adding that Volkswagen could face fines of up to $18 billion as a result.

The Detroit News reported late Friday that VW dealers still had some 2015 diesel Jetta, Passat and Beetle cars for sale.

A VW representative on Sunday confirmed the partial halt of sales of the affected vehicles but did not give any numbers.

Winterkorn said, "We do not and will not tolerate violations of any kind of our internal rules or of the law," adding that the company was fully cooperating with the relevant agencies.

He gave no details on who would carry out the external investigation.

"This is not your usual recall issue, an error in calibration or even a serious safety flaw," Bernstein analysts wrote in a note on Sunday. "There is no way to put an optimistic spin on this - this is really serious."

Cynthia Giles, an enforcement officer at the EPA, said on Friday the cars in question "contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test".

The feature, which the EPA called a "defeat device," masks the true emissions only during testing. When the cars are on the road, they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

"We have admitted to it to the regulator. It is true. We are actively cooperating with the regulator," a Volkswagen spokesman said on Sunday.

Volkswagen could face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. Some 482,000 four-cylinder VW and Audi diesel cars sold since 2008 are involved in the allegations.

If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed during the telephone conference on Friday.

Volkswagen peer Daimler, meanwhile, signaled it may not be subject to the same violation.

"I have a rough idea of what is happening and that it does not apply to us," Daimler Chief Executive Dieter Zetsche said on Sunday at an event in Hamburg.

"But it is much too early to make a final statement on this," he added.

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USA Today:

http://www.usatoday.com/story/money/cars/2015/09/20/volkswagen-ceo-martin-winterkorn-apologizes-epa-clean-air-act-emissions-violations/72519678/

Volkswagen issues sales halt; CEO apologizes on emissions cheating

Nathan Bomey, USA TODAY 8:02 a.m. EDT September 21, 2015

Volkswagen has admitted cheating U.S. diesel emissions tests, sending company shares plunging as much as 23 percent in Frankfurt and potentially leaving the company open to billions of dollars in fines. Bloomberg

Martin Winterkorn ordered an external investigation after the EPA disclosed the violations.

Volkswagen's CEO said he is "deeply sorry" for violating U.S. emissions standards and ordered an external investigation Sunday, two days after the Environmental Protection Agency (EPA) accused the automaker of purposefully manipulating emissions tests for almost 500,000 vehicles.

The German automaker ordered its U.S. dealerships to stop selling cars impacted by the probe until its engineers can deliver a fix.

The EPA accused Volkswagen of installing software on 482,000 diesel cars in the USA that allowed it to cheat emissions tests, potentially exposing people to harmful pollutants at levels of 40 times the acceptable standard and respiratory conditions such as asthma.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn, Volkswagen's CEO, said in a statement. "We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly and completely establish all of the facts of this case." Winterkorn pledged to regain the public's trust.

The violations could expose Volkswagen — the world's largest vehicle manufacturer through the first six months of 2015 — to up to $18 billion in federal fines if the EPA assesses the maximum possible penalty of $37,500 per vehicle.

The violations could invite charges of false marketing by regulators, a vehicle recall and payment to car owners, either voluntarily or through lawsuits. Volkswagen advertised the cars under the "Clean Diesel" moniker.

The state of California is investigating the emissions violations.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," Winterkorn said. The company's board takes the allegations "very seriously," he said.

The EPA accused the German automaker of adopting what it called a "defeat device" to trick U.S. regulators into believing its cars met Clean Air Act standards for nitrogen oxides. Volkswagen admitted to investigators it had installed the defeat device, the EPA said.

The EPA said impacted cars include the 2009 to 2014 Volkswagen Jetta, Beetle and Golf, the 2014 and 2015 Volkswagen Passat and the 2009 to 2015 Audi A3.

Volkswagen told dealers they cannot sell the 4-cylinder diesel versions of those cars until a fix is available, Volkswagen spokesman Mario Guerreiro said Sunday.

The sales halt could put a significant dent in the company's September sales performance. About 20% of Volkswagen's vehicle sales are diesel engines, said AutoPacific analyst Dave Sullivan.

"It totally goes against all of the marketing they have had of a clean diesel," Sullivan said of the violations. "That's one of the biggest selling points for Volkswagen."

"The trust of our customers and the public is and continues to be our most important asset," Winterkorn said Sunday. "We at Volkswagen will do everything that must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused. This matter has first priority for me, personally, and for our entire Board of Management."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 3:22 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Sacramento Bee:

http://www.sacbee.com/news/business/article35709432.html

Regulators order Volkswagen recalls over device used to trick smog tests

BY DALE KASLER

In a joint probe with California air regulators, the federal government Friday told Volkswagen to recall 480,000 diesel-fuel cars, charging the automaker with equipping the cars with software designed to circumvent pollution limits.

The U.S. Environmental Protection Agency and California Air Resources Board sent notices to the German automaker over its alleged use of something called a "defeat device," a piece of software that controls emissions during smog tests but not when the vehicles are actually on the road.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant EPA administrator, in a prepared statement. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules."

The EPA sent Volkswagen a "notice of violation" and told car owners they can expect a recall notice. The agency said all repairs will be done at Volkswagen's expense. It added that the cars are safe to drive. The EPA has the authority to order automotive recalls.

Stanley Young, a spokesman for the ARB, said the federal and state agencies were first notified of the problem by independent researchers at West Virginia University and the International Council on Clean Transportation. Months of followup testing, including tests at an ARB lab in El Monte, confirmed the analyses.

Volkswagen officials in early September "admitted to CARB and EPA staff that these vehicles were designed and manufactured with a defeat device," according to an enforcement letter the California agency sent Friday to Volkswagen officials.

Young said "our major goal is to ensure that these cars come into compliance, that they're the same in the real world as they are on the test bench." The automaker eventually could face fines or other enforcement actions, he said.

The agencies plan to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," said Richard Corey, executive officer of ARB, in a prepared statement.

The EPA said the recall affects VW Jettas, Beetles, Golfs and Audi A3s made in the 2009 to 2015 model years. It also covers VW Passats made in the 2014 and 2015 model years. Only diesel cars are affected. Young said ARB believes there are as many as 50,000 affected vehicles on the road in California.

Under the federal Clean Air Act, California has the authority to set its own regulatory standards for car emissions.

Volkswagen of America spokesman Darryll Harrison Jr. said the company is cooperating with the federal and state agencies but had no further comment.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 3:10 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

The Atlantic:

http://www.theatlantic.com/technology/archive/2015/09/volkswagens-game-of-make-belief/406159/

Volkswagen's Game of Make-Believe

The company inserted a device into almost 500,000 cars meant to trick emissions testing, the EPA says.

ROBINSON MEYER

One of the great lessons of the pioneering computer scientist Alan Turing is this: Computers are only pretending machines. Software is always just imitating something else.

Volkswagen seems to have taken this maxim to new heights. The Environmental Protection Agency alleges that the company installed "defeat devices" in its four-cylinder Volkswagen and Audi-brand diesel cars from 2009 to 2015.

These devices, essentially, let the cars pretend to not break the law. The software could sense when the car was undergoing emissions testing and activate its pollution-control systems accordingly. When the car was being driven during normal use, these systems largely did not activate—making the car a much heavier polluter in real-life than it looked on paper.

With those systems deactivated, the car's emissions violated the Clean Air Act and California's state pollution-control regulation.

"Using a defeat device in cars to evade clean-air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance, in a statement.

There are almost 500,000 vehicles on American roads with the devices installed, according to the EPA. Volkswagen must now pay to repair the emissions systems in affected cars. The government may also fine the company as much as $18 billion.

The device was discovered by researchers at West Virginia University, who notified the EPA and California state authorities. The two authorities investigated further, and after demanding "an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices," said a statement from the agency.

I reached out to Volkswagen for comment and haven't heard back yet. The Times reports

that the company is complying with investigations.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:58 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Mashable:

http://mashable.com/2015/09/18/volkswagen-recall-emissions/#uL1ctrM4JZkb

Volkswagen urged to recall cars for allegedly cheating emissions test

BY CHRIS PERKINS

Automakers are under intense pressure to meet emissions regulations put in place by the world's governments. Volkswagen allegedly had a slightly different solution.

The U.S. Environmental Protection Agency (EPA) ordered a recall of almost 500,000 Volkswagen and Audi vehicles equipped with four-cylinder diesel engines, for software designed to sidestep emissions regulations, reports the New York Times.

In total, 482,000 vehicles are being implicated, including the 2009-2015 Volkswagen Golf, Beetle, Jetta and Beetle, the 2014-2015 Volkswagen Passat and the 2009-2015 Audi A3. The cars were possibly installed with a "defeat device," a piece of software designed to detect when the car is undergoing emissions testing and turn on all of the car's emissions control systems then. In normal driving, the systems would turn off, causing 40 times larger nitrogen oxide emissions, according to the E.P.A.

Nitrogen oxide is a major contributor to smog, which can lead to increased respiratory

problems and premature death.

The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation. The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation.

U.S. regulators hope that this recall will send a message to automakers to not develop software to skirt regulations. Last November, Hyundai and Kia were fined $100 million for violating the Clean Air Act. The two companies inflated their fuel economy figures for their 2012 vehicles.

The likely reason why Volkswagen could go the trouble to develop and use software like this is to boost performance; emissions control equipment tends to suck power out of an engine.

Researchers from West Virginia University, working with the International Council on Clean Transportation, discovered the software, according to the EPA's press release.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time," said a representative for Volkswagen.

A representative for the EPA wasn't immediately available for comment.

It's unclear if this issue only pertains to U.S. model Volkswagens and Audis equipped with four-cylinder diesels, or their world-market counterparts as well.

A report from Jalopnik notes that all of Volkswagen's ads for its diesel models have been deleted from YouTube, apparently at the company's request.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:51 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Christian Science Monitor:

http://www.csmonitor.com/Business/In-Gear/2015/0918/Why-the-EPA-is-forcing-Volkswagen-to-recall-nearly-500-000-cars

Why the EPA is forcing Volkswagen to recall nearly 500,000 cars

Volkswagen AG, the German car manufacturer, is under investigation by California and US emissions regulators for allegedly circumventing emission tests with a new device.

By Corey Fedde, Staff SEPTEMBER 18, 2015

Volkswagen AG is under investigation for circumventing clean air rules.

German automotive company Volkswagen AG is under investigation by California and US environmental regulators. The US Environmental Protection Agency told Reuters Volkswagen allegedly used software to circumvent emissions testing of specific air pollutants.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an EPA enforcement officer, told Reuters via teleconference.

The feature, known as a "defeat device," is allegedly present in 4 cylinder Volkswagen and Audi vehicles from 2009-2015, which total nearly 500,000 vehicles. The device is programmed to detect when the car is undergoing an emissions test and turn on the full emissions controls. The device then turns the emission controls off during normal driving. The result being far more pollution than the company reported, the EPA told The New York Times.

The pollutant the "defeat device" is designed to conceal, nitrogen oxide, has been linked by public health officials to variety of health problems, including asthma.

The 500,000 diesel vehicle models affected include 2009-2015 Volkswagen Jettas, Beetles, Golfs, Passats, and Audi A3s.

The violation and investigation belie a growing trend in more aggressive environmental enforcement from federal regulators. In November 2014, the administration announced its largest ever penalty for a violation of the Clean Air Act on Korean automakers Hyundai Motor and Kia Motors. The fine involved a $300 million settlement for overstating vehicle fuel-economy standards on more than 1 million cars.

According to The New York Times, analysts say the crackdown is meant to send a clear message to automakers that circumventing federal rules will not be tolerated.

California, the EPA, and the Justice Department are working together on the investigation.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health. Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations," Ms. Giles told the Times.

This report includes material from Reuters.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:27 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Reuters:

http://www.reuters.com/article/2015/09/18/us-usa-volkswagen-idUSKCN0RI1VK20150918

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG (VOWG_p.DE) could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we

are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:40 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

The Hill:

http://thehill.com/policy/energy-environment/254188-epa-accuses-vw-of-going-around-federal-emissions-standards

Feds accuse VW of going around federal emissions standards

By Devin Henry - 09/18/15 12:50 PM EDT

The Environmental Protection Agency (EPA) is accusing Volkswagen of looking to circumvent federal air pollutant emission standards for the last six years.

EPA officials alleged Friday that about 482,000 VW vehicles sold since 2008 violate the Clean Air Act due to software installed on the vehicles that turns off required air pollution protections.

Janet McCabe, an acting assistant administrator, said the EPA "intends to hold VW responsible to recall the vehicles" and fix the emissions problem. The company could face up to an $18 billion fine for the violations.

The EPA issued VW a Clean Air Act violation notice Friday, alleging it used a software algorithm on certain vehicles that would turn on emission controls only when they undergo official emissions testing.

This "defeat device," the EPA said, would switch off those controls during normal operation, which means the vehicles could emit up to 40 times the amount of nitrogen oxide allowed under federal air pollution standards.

"These violations are very serious … not only because they result in excess emissions, but also because VW was concealing the fact from EPA, the state of California and from consumers," Assistant Administrator Cynthia Giles said. "We expected better from VW."

Federal law requires manufacturers to certify to the EPA that their cars meet emissions standards before selling their vehicles in the U.S. Cars with defeat devices cannot be certified, the EPA said.

A VW statement said only that the company had received the violation notice and is cooperating with the investigation.

The EPA and the California Air Resources Board discovered the defeat device during an analysis at West Virginia State University, the EPA said. Officials said their investigation into the incident is ongoing and wouldn't give many more details about how it developed or what the outcome might be.

The agency is not ordering a recall or announcing penalties at the moment, and officials said the cars are safe and legal to drive. The Friday announcement, Giles said, was meant to "inform the public right away and to put VW on notice of our continuing investigation."

The EPA said the announcement covers VW Jettas, Beetles, Golfs and Audi A3s with model years between 2009 and 2015, as well as the VW Passat with model years 2014 and 2015.

Fortune:

http://fortune.com/2015/09/18/volkswagen-recall-epa-smog/

Volkswagen ordered to recall almost a half-million cars over emissions trick

by Benjamin Snyder

The Environmental Protection Agency is ordering Volkswagen to recall nearly a half-million cars after the company allegedly used a computer software trick to make the cars seem more environmentally friendly during state emissions tests.

The VW models involved include the diesel versions of the following models: The 2009-15 Volkswagen Jetta, the 2009–15 Beetle, the 2009–15 Golf, the 2014-15 Passat and the 2009-15 Audi A3. The recall affects 482,000 vehicles in total.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance Assurance, in a statement. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen says. "VW is cooperating with the investigation; we are unable to comment further at this time."

Auto Guide:

http://www.autoguide.com/auto-news/2015/09/volkswagen-used-illegal-software-to-cheat-emissions-tests-epa.html

Volkswagen Used Illegal Software to Cheat Emissions Tests: EPA

By Stephen Elmer Sep 18, 2015

Volkswagen may be forced to recall almost 500,000 diesel passenger cars after an investigation revealed illegal software was allowing the vehicles to pass government emissions standards.

A software algorithm, known as a defeat device, used on roughly 482,000 Volkswagen vehicles with four-cylinder diesel engines is able to detect when the car is undergoing official emissions testing, and will activate full emissions controls only during the test.

The EPA says that this results in cars that meet emissions standards while being tested, but

emit 40 percent more nitrogen oxides while driving.

Independent analysis at West Virginia University uncovered the defeat devices. After being questioned by the EPA and CARB, Volkswagen admitted that its cars did contain defeat devices.

The EPA says "it is incumbent" on Volkswagen to initiate a recall fix for all the affected cars, although they note that these vehicles are still safe to drive and do not present a safety hazard at this time.

Volkswagen may be liable for civil penalties over the findings, which could total up to $18 billion if the EPA leverages its maximum find of $37,500 per vehicles.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

Models affected by the issue include the 2009-2015 Volkswagen Jetta, Beetle and Gold. The 2009-2015 Audi A3 is also affected, along with the 2014-2015 Passat.

Volkswagen acknowledged that it has received notice of the investigation. "VW is cooperating with the investigation; we are unable to comment further at this time," said the brand.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:36 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Post:

http://www.washingtonpost.com/news/energy-environment/wp/2015/09/18/epa-volkswagen-used-defeat-device-to-circumvent-air-pollution-controls/

EPA: Volkswagen used 'defeat device' to circumvent air pollution controls

By Joby Warrick September 18 at 1:04 PM

The Environmental Protection Agency on Friday accused Volkswagen of installing a software "defeat device" that circumvented pollution controls on nearly a half-million Volkswagens and Audis.

The regulatory agency filed a notice of violation against the German automaker, saying the company deliberately cheated on clean-air rules by installing the software of five of its models since 2008. An EPA statement warned of possible civil penalties and hinted of a future possible recall, saying it was "incumbent on Volkswagen to initiate the process" to fix the affected cars' emissions systems.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the EPA's assistant administrator for EPA's Office of Enforcement and Compliance Assurance.

EPA officials, in a joint probe with California's regulatory agency, determined that Volkswagen had inserted a sophisticated algorithm in the cars' emissions software that could detect when a vehicle was undergoing emissions testing. The software, which the EPA called a "defeat device," would turn on full emissions controls during testing, and switch them off again under normal driving conditions.

As a result, the cars emitted far more pollution–up to 40 times the federal standard for the pollutant known as NOx, a component in urban smog, the EPA said.

The software was installed in Volkwagen's Golfs, Jettas and Beetles and Audi A3s beginning in the model year 2009, and in Volkswagen's Passat models beginning in 2014. EPA officials said no action was required by owners of the car, but they suggested that Volkswagen would be compelled to address the problem.

"Our goal now is to ensure that the affected cars are brought into compliance, said Richard Corey, the executive officer for California's Air Resources Board." He said federal and state agencies intended to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:31 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

Agency says German auto maker circumvented air-pollution standards with software

By AMY HARDER

WASHINGTON—The U.S. Environmental Protection Agency issued a notice on Friday alleging that Volkswagen AG circumvented air-pollution standards with software installed on nearly a half million cars sold in the U.S. since 2008.

Officials said Volkswagen could face penalties of up to $37,500 per vehicle, or a total of more than $18 billion, though it remained unclear whether the government would eventually levy such a large penalty. Officials said the German auto maker violated the federal Clean Air Act.

The agency said that owners of these cars don't need to take any action right now and that while the cars have emissions exceeding federal standards, "these violations do not present a safety hazard and the cars remain legal to drive," according to the EPA.

Officials said a recall hasn't been announced and an investigation continues. They plan to at some point order Volkswagen to fix the vehicles, officials said.

Top EPA officials made the announcement alongside the California Air Resources Board, which is separately investigating the alleged use of the software, which EPA describes as a "defeat device." The software reduces the effectiveness of a car's emission control system during normal driving conditions and enables the car to emit nitrogen oxides at up to 40 times the allowable standard, according to the EPA.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance at the EPA.

"Volkswagen Group of America Inc., Volkswagen AG and Audi AG received today notice from the U.S. Environmental Protection Agency, U.S. Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen said in a statement. "VW is cooperating with the investigation; we are unable to comment further at this time."

EPA said that its allegations cover roughly 482,000 diesel passenger cars with model years between 2009 and 2015 and sold in the U.S. since 2008. They include the following models: the Jetta, Beetle, Audi A3, Golf and Passat.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the "defeat device" software, Volkswagen was violating two parts of the Clean Air Act.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:19 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

NPR:

http://www.npr.org/sections/thetwo-way/2015/09/18/441467960/volkswagen-used-defeat-device-to-skirt-emissions-rules-epa-says

Volkswagen Used 'Defeat Device' To Skirt Emissions Rules, EPA Says

BILL CHAPPELL

Saying Volkswagen violated the Clean Air Act, the Environmental Protection Agency says the company's diesel-powered cars have sophisticated software that detects emissions testing – and "turns full emissions controls on only during the test."

Installed on four-cylinder cars, the software, which the EPA calls a "defeat device" that's meant to trick official tests, allowed diesel Jettas, Beetles, and other cars to "emit up to 40 times more pollution" than allowed under U.S. emission standards.

The agency says that after the carmaker was confronted with emission test results this month, it admitted that the cars contain defeat devices.

Volkswagen must now fix the cars' emissions control systems, the agency says, adding that Volkswagen could be liable for civil penalties and other punishment. The cars in question are popular Volkswagen and Audi models that were made from 2009 to this year.

The affected diesel cars include:

- Jetta (Model Years 2009 – 2015)
- Beetle (Model Years 2009 – 2015)
- Audi A3 (Model Years 2009 – 2015)
- Golf (Model Years 2009 – 2015)
- Passat (Model Years 2014-2015)

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance.

The Verge:

http://www.theverge.com/2015/9/18/9352757/epa-volkswagen-recall-emissions

Volkswagen ordered to recall 500,000 cars for gaming emissions testing

By Colin Lecher

The federal government has ordered Volkswagen to recall almost 500,000 vehicles, saying the company unlawfully used special software to get around missions regulations.

VOLKSWAGEN ALLEGEDLY USED A "DEFEAT DEVICE."

Volkswagen allegedly used a so-called "defeat device" on certain models made in the past six years. The device works by only turning on emissions control when undergoing emissions testing, but not when the car is actually being driven normally and pollution is at its peak. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," the EPA said in a statement.

Using such a device is a violation of the Clean Air Act, which, as The New York Times points out, the EPA has been increasingly cracking down on. In November, the agency hit Hyundai and Kia with a record $100 million fine for violations under the act.

The cars affected by the recall include the 2009 to 2015 Jetta, Beetle, Golf, and Audi A3. The 2014 and 2015 Passat is also included. According to the EPA, that adds up to 482,000 cars.

Jalopnik:

http://jalopnik.com/epa-orders-volkswagen-to-recall-482-000-diesel-cars-for-1731665972

EPA Orders Volkswagen To Recall 482,000 Diesel Cars For Cheating On Emissions

Patrick George

The New York Times reports Volkswagen has been ordered by the Environmental Protection Agency to recall 482,000 diesel cars in the U.S. over software they say was intentionally designed to circumvent smog regulations.

The cars, all diesels from 2009 to 2015, have a "defeat device" programmed to detect when the car is undergoing official emissions testing that only then turns on the full emissions control systems, the Times reports.

These controls are turned off in other situations, leading to far greater emissions than VW let on — which is against the law. The devices were designed to conceal nitrogen oxide emissions.

It's not immediately clear why VW had such a system on these cars, how the system detected official testing versus normal driving, or if the cars operated differently in normal driving when the defeat device was off. What effect did reducing NOx emissions have on fuel economy or performance?

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

The state of California and the Justice Department are also investigating the violation, the paper reports.

The vehicles affected are the 2009-2015 diesel Jetta, Beetle, Golf, Passat and Audi A3.

More on this as we get it.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:10 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit Free Press:

http://www.freep.com/story/money/cars/2015/09/18/epa-volkswagen-used-software-skirt-emissions-rules/72399372/

EPA: Volkswagen used software to skirt emissions rules

By Greg Gardner

The U.S. Environmental Protection Agency and California are accusing Volkswagen of violating the Clean Air Act by using software that allows hundred of thousands of VW and Audi diesel-powered cars to get around emission standards.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for enforcement and compliance assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The agency's notice of violation covers about 482,000 diesel cars sold between 2009 and 2015 model years.

Affected diesel models include:

Jetta (model years 2009 – 2015)

Beetle (model years 2009 – 2015)

Audi A3 (model years 2009 – 2015)

Golf (model years 2009 – 2015)

Passat (model years 2014-2015)

California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board (CARB) have both initiated investigations based on Volkswagen's alleged actions.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said CARB executive officer Richard Corey. "Our goal is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The federal and California regulators say Volkswagen used a sophisticated software algorithm on certain Volkswagen vehicles that detects when the car is undergoing official emissions testing and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations.

As a result the cars met emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the permissible standard. The software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

Corey said testing groups in Europe found information that indicated Volkswagen may have manipulated its emission tests and told California regulators about their suspicions.

NOx pollution contributes to nitrogen dioxide, ground-level ozone and fine particulate matter. Exposure to these pollutants has been linked with a range of serious health effects, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, elderly people and those with pre-existing respiratory disease are particularly at risk for health effects of these pollutants.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified. By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, Volkswagen violated two important provisions of the Clean Air Act.

EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization. The researchers raised questions about emissions levels, and the agencies began further investigations into the issue. In September, after EPA and CARB demanded an explanation for the emission problems, Volkswagen admitted that the cars contained defeat devices.

VW may be liable for civil penalties of up to $37,500 per vehicle found to be violating the standard, or potentially more than $18 billion.

It is incumbent upon Volkswagen to initiate the process that will fix the cars' emissions systems. Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time.

Wired:

http://www.wired.com/2015/09/epa-accuses-volkswagen-cheating-emissions-testing-482000-cars/

EPA ACCUSES VOLKSWAGEN OF CHEATING EMISSIONS TESTING ON 482,000 CARS

Alex Davies

THE EPA IS accusing Volkswagen of illegally using software to cheat emissions standards, allowing the German automaker to sell half a million cars that produce smog at 40 times the legal limit.

In a notice of violation of the Clean Air Act sent to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc today, the EPA said diesel-powered VW cars used a "defeat device," a kind of "a sophisticated software algorithm [that] detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations."

The accusation applies to 482,000 diesel-powered, four-cyclinder Jetta, Beetle, Audi A3, Golf, and Passat cars sold between 2008 and 2015 in the US. The news comes as the Frankfurt motor show, one of the biggest events of the year for the automaker, opens to the press. VW will be required to fix the problem, at no cost to car owners.

The Week:

http://www.theweek.com/speedreads/578080/epa-catches-volkswagen-blatantly-cheating-smog-tests

EPA catches Volkswagen blatantly cheating on smog tests

Jeva Lange

Almost half a million Volkswagen cars, including recent diesel models of Jettas, Beetles, Audi A3s, Golfs, and Passats, may be recalled in an enormous crackdown on the German carmaker's alleged blatant circumvention of smog standards, The New York Times reports.

The Environmental Protection Agency has demanded that the cars be recalled, and specifically accused Volkswagen of installing software, called a "defeat device," in their cars that basically just lies about what a car's emissions are during tests:

The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said. [The New York Times]

Car emissions contain nitrogen oxide, which creates smog, as well as pollutants that cause asthma.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:56 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

LA Times:

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Volkswagen is accused of sidestepping emissions rules, 'cheating' pollution tests

By JERRY HIRSCH

Federal and California environmental regulators accused Volkswagen of using software that "cheats" pollution testing in nearly 500,000 recent model VWs and Audis by circumventing emission standards in its diesel cars.

The German automaker will eventually have to recall all of the vehicles and change the

emissions systems at its own expense, regulators said. Additionally it could face a fine of about $18 billion, or $35,500 per car, federal environmental officials said.

The Environmental Protection Agency on Friday issued the German automaker a "notice of violation" of the Clean Air Act for both VW models and the company's Audi luxury brand. It covers models equipped with four-cylinder diesel engines. The California Air Resources Board issued a similar letter.

Volkswagen and Audi vehicles from model years 2009-2015 have the software, which uses an algorithm that detects when the vehicle is undergoing pollution tests and changes the way it performs from when it is being driven on the open road.

It "is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "EPA is committed to making sure that all automakers play by the same rules."

"We expected better from VW," Giles said.

Air Resources Board Executive Officer Richard Corey said the California agency wants to bring the cars "into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

Volkswagen said it is cooperating with the investigation.

"We are unable to comment further at this time," the company said in a statement.

The affected diesel models include: Jetta (model years 2009 – 2015,) Beetle (model years 2009 – 2015,) Audi A3 (model years 2009 – 2015,) Golf (model years 2009 – 2015) and Passat (model years 2014-2015.)

International Business Times:

http://www.ibtimes.com/volkswagen-audi-recall-500000-cars-broke-environmental-rules-white-house-says-2104099

Volkswagen And Audi Recall: 500,000 Cars Broke Environmental Rules, White House Says

By Christopher Harress

The Obama administration Friday forced car manufacturer Volkswagen to recall nearly 500,000 cars after it was discovered the German automaker had fitted its vehicles with special technology that can beat environmental tests for reducing smog, according to a new report.

The recall, which was imposed after an investigation by the Environmental Protection Agency, is expected to affect four-cylinder Volkswagen and Audi cars that were manufactured between 2009 and 2015.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance, told the New York Times.

"Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:52 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn,

John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit News:

http://www.detroitnews.com/story/business/autos/foreign/2015/09/18/epa-vw-diesel-vehicles-violated-emissions-rules/72401296/

EPA: 482K VW diesel vehicles violated emissions rules

David Shepardson

Washington — The Environmental Protection Agency and the state of California said Volkswagen AG violated federal law by allowing 482,000 diesel VW and Audi cars sold since 2009 to evade emissions requirements using sophisticated software.

The announcement is a big setback to the German automaker that has made diesel vehicles a big part of its U.S. strategy. VW could face fines or criminal prosecution and must immediately prevent those vehicles from being able to defeat emissions rules.

VW concealed facts but has now admitted wrongdoing, said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "We expected better from VW," she said.

The agencies allege that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air pollutants. California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board have initiated investigations based on Volkswagen's alleged actions.

EPA said the vehicles software "detects when the car is undergoing official emissions

testing, and turns full emissions controls on only during the test." The vehicles include diesel Golf, Jetta, Sportwagen, Beetle and Audi A3 vehicles built from 2009-2015.

EPA said "the effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a 'defeat device,' as defined by the Clean Air Act."

NOx pollution contributes to nitrogen dioxide, ground-level ozone, and fine particulate matter. EPA said exposure has been linked to serious health issues, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. "Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, the elderly, and people with pre-existing respiratory disease are particularly at risk for health effects of these pollutants," EPA said.

This is the latest example of automakers not following the miles per gallon and emissions rules.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Giles. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said Air Resources Board Executive Officer Richard Corey. "Our goal now is to ensure that the affected cars are

brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The issue first came to the attention of the agencies in 2014 after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels, and the agencies began further investigations into the issue.

In September, after EPA and CARB demanded an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices, the agencies said.

EPA said VW must recall the vehicles. EPA said "owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

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AP (via ABC News):

http://abcnews.go.com/Politics/trump-candidates-criticize-donald-muslim-comments/story?id=33858500

EPA Says VW Intentionally Violates Clean Air Standards

By MATTHEW DALY, ASSOCIATED PRESS WASHINGTON — Sep 18, 2015, 12:42 PM ET

The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.

Bloomberg:

http://www.bloomberg.com/news/articles/2015-09-18/epa-says-volkswagon-software-circumvented-car-emissions-testing

EPA Says Volkswagen Circumvented Car Emissions Tests

Jeff Plungis

Volkswagen AG sold diesel cars with software that circumvented U.S. emissions standards for air pollution, the Environmental Protection Agency said.

The company sold Volkswagen and Audi brand cars from model years 2009-2015 that contained a "sophisticated software algorithm" that detects when the car is undergoing official emissions testing, and turns on full emissions control, the agency said. During normal driving times, the systems don't operate fully, regulators said.

The potential fine is $37,500 per vehicle and 482,000 autos are part of the case, yielding a potential fine of more than $18 billion, Cynthia Giles, EPA assistant administrator for enforcement and compliance, said on a phone call with reporters Friday.

California is also investigating the claims.

Volkswagen said in a statement it is cooperating with the investigation and unable to comment further.

Business Insider:

http://www.businessinsider.com/vw-told-to-recall-500000-cars-after-us-government-accuses-it-of-dodging-clean-air-standards-2015-9

VW told to recall 500,000 cars after US government accuses it of dodging clean air standards

Benjamin Zhang

The Environmental Protection Agency has ordered the recall of 500,000 Volkswagen cars.

According to Coral Davenport of the New York Times, the EPA accused VW of using hidden software — called a "defeat device" — to dodge clean air standard during emissions testing.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," assistant administrator for the Office of Enforcement and Compliance Assurance said Cynthia Giles said in a statement.

"Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

In response to the recall, Volkswagen issued the following statement to Business Insider.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time."

The recall affects 482,000 diesel powered cars sold in the US since 2008. They include:

Volkswagen Jetta TDI: 2009-20015

Volkswagen Beetle TDI: 2009-2015

Audi A3 TDI: 2009-2015

Volkswagen Golf TDI: 2009-2015

Volkswagen Passat TDI: 2014-2015

This story is developing. We will update when more information is available.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:42 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Examiner:

http://www.washingtonexaminer.com/epa-says-audi-vw-cheating-on-emissions/article/2572404

EPA says Audi, VW cheating on emissions

By JOHN SICILIANO

The Environmental Protection Agency and California regulators charged automakers Volkswagen and Audi on Friday with purposefully violating emission standards in their line of diesel cars.

EPA accused the automakers of using a device in their vehicles to get around the pollution rules. According to EPA, the device regulates emissions, but only turns on and works while emissions are being tested.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for the agency's enforcement office. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

Giles said VW was "concealing facts" about the devices. The vehicle models involved include the popular Jetta, Audi A-3, Passat and the iconic Beetle, and in model years 2009-2015. The violations cover 482,000 diesel passenger cars.

The EPA's announcement isn't a final decision, but is a clear sign that the EPA believes it has a case against the automakers, one that could lead to fines as large as $37,000 per vehicle. All together, the combined fines could pile up to $18 billion.

An EPA statement said "California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board ... have both initiated investigations based on Volkswagen's alleged actions."

"Working with US EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," the California board's CEO Richard Corey said. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

WPTZ:

http://www.wptz.com/money/epa-accuses-vw-of-cheating-on-emission-rules/35352250

EPA accuses VW of cheating on emission rules

Published 12:29 PM EDT Sep 18, 2015

NEW YORK (CNNMoney) —Diesel cars from Volkswagen and Audi cheated on clean air rules by including software that made the cars look cleaner than they actually were, according to federal and California regulators.

The regulators say that the software on the cars turned up the emission controls only when it could tell that the car was being tested.

"The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations," said the Environmental Protection Agency's notice to the company. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides at up to 40 times the standard."

There are nearly 500,000 of the diesel cars on U.S. roads. The models include the VW Jetta, the Beetle and the Golf from model years 2009 through 2015, the Passat from 2014-2015 as well as the Audi A3, model years 2009-2015. The luxury brand is owned by Volkswagen.

Owners of the affected cars do not face health risks according to the EPA and can to continue to drive or sell the cars. But the EPA says that VW will be responsible for fixing the problem.

Volkwagen did not immediately respond to a request for comment.

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City AM:

http://www.cityam.com/224676/volkswagen-told-recall-500000-vehicles-over-emissions

Volkswagen told to recall 500,000 vehicles over emissions

by Catherine Neilan

Volkswagen has been ordered to recall nearly half a million cars in the US by the Obama administration, which claims the German car group used software that was purposely designed to dodge environmental standards for reducing smog.

The US government's Environmental Protection Agency issued the company a notice of violation this afternoon, accusing Volkswagen of having installing a "defeat device" into its four-cylinder Volkswagen and Audi vehicles between 2009 and 2015, according to the New York Times.

The device is programmed to detect when the car is undergoing emissions test, during which time it will turn on its full emissions control systems. These controls are reportedly

then turned off when the car is driving in "normal" situations, when the cars pollute more heavily than reported by Volkswagen, the EPA claims.

The government agency estimates that 482,000 diesel passenger vehicles are affected.

Volkswagen could not be contacted at the time of publication.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:33 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Times:

http://www.washingtontimes.com/news/2015/sep/18/epa-volkswagen-used-software-cheat-emissions-tests/

EPA: Volkswagen used 'sophisticated software' to cheat emissions tests

By Ben Wolfgang - The Washington Times - Friday, September 18, 2015

The Obama administration on Friday accused Volkswagen of using a "sophisticated software algorithm" to cheat on emissions testing and mask the fact that some models emit too much harmful pollution.

Some Volkswagen cars from model years 2009 to 2015, the Environmental Protection Agency said, include software that can detect when they're undergoing emissions testing. Full emissions controls were activated only during testing and then automatically shut down during normal operation, the agency charged.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

During normal operation, the "defeat device" allowed Volkswagen cars to emit nitrogen oxides at up to 40 times the federal threshold as laid out in the Clean Air Act.

The EPA has issued "a notice of violation" to the automaker, and the state of California has launched its own investigation into the matter. Volkswagen could face civil penalties for the violations, the agency said.

The allegations apply to about 482,000 diesel passenger cars sold since 2008, including Jettas, Beetles, Audi A3s, Golfs and other models.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:26 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

USA Today:

http://www.usatoday.com/story/money/cars/2015/09/18/epa-accuses-volkswagen-audi-evading-emission-laws/72400018/

EPA accuses Volkswagen, Audi of evading emission laws

Nathan Bomey, USA TODAY 12:12 p.m. EDT September 18, 2015

The German automaker adopted a "defeat device" to trick regulators, the EPA said.

The Environmental Protection Agency on Friday accused Volkswagen of installing software on certain cars in the U.S. to evade federal emission regulations, potentially exposing people to harmful pollutants.

The German automaker adopted what the EPA called a "defeat device" to trick U.S. regulators into believing that its cars met Clean Air Act standards, the federal agency said in a statement.

The agency said 482,000 cars violated federal standards, including four-cylinder Volkswagen cars from 2009-15 and Audi diesel cars from the same period. They included the Volkswagen Jetta, Beetle, Golf and Passat, and the Audi A3.

Volkswagen, whose brands include the luxury Audi lineup, may face fines or other penalties, the EPA said.

The cars are still safe to drive, the EPA said, and owners do not need to take immediate action. But the agency will require Volkswagen to fix the cars for free.

Newsweek:

http://www.newsweek.com/epa-volkswagen-software-cheat-clean-air-rules-373869

EPA: Volkswagen Used Software in Cars to Cheat on Clean Air Rules

BY ZOË SCHLANGER 9/18/15 AT 12:14 PM

A U.S. Environmental Protection Agency investigation has concluded that for years Volkswagen has been installing software in its vehicles that circumvents federal emissions standards for air pollution, the agency announced Friday.

EPA alleges that Volkswagen installed a "sophisticated software algorithm on certain Volkswagen vehicles" that could detect when the car was being tested for emissions. The software would turn full emissions controls on only during the official test. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," EPA said in a press release. They called the software a "defeat device," deliberately installed to evade the Clean Air Act standards.

This "defeat device" was found in several car models, from 2009 models up to 2015 models, according to EPA:

Jetta (Model Years 2009 – 2015)

Beetle (Model Years 2009 – 2015)

Audi A3 (Model Years 2009 – 2015)

Golf (Model Years 2009 – 2015)

Passat (Model Years 2014-2015)

In total, this includes about 482,000 passenger cars.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, EPA's Assistant Administrator for the Office of Enforcement and Compliance Assurance, said in a statement emailed Friday. The agency worked with California regulators to investigate the automobile manufacturer and issue a notice of violation.

"Our goal now is to ensure that the affected cars are brought into compliance, to dig more

deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," California Air Resources Board Executive Officer Richard Corey said in the statement.

Volkswagen has yet to respond publicly to the EPA allegations. Newsweek has reached out to the company for comment, and we will update if they respond.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:20 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: Volkswagen Clips 9/18/2015

NY Times:

http://www.nytimes.com/2015/09/19/business/volkswagen-is-ordered-to-recall-nearly-500000-vehicles-over-emissions-software.html?_r=0

Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

By CORAL DAVENPORT SEPT. 18, 2015

WASHINGTON — The Obama administration on Friday ordered Volkswagen to recall nearly a half million cars from the road, saying the German automaker used software intentionally designed to circumvent environmental standards for reducing smog.

The Environmental Protection Agency issued the company a notice of violation and accused the company of breaking the law by installing software known as a "defeat device" in 4-cylinder Volkswagen and Audi vehicles from model years 2009-15. The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during

normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

The software was designed to conceal the cars' emissions of the pollutant nitrogen oxide, which contributes to the creation of ozone and smog. The pollutants are linked to a range of health problems, including asthma attacks and other respiratory diseases.

The state of California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

The allegations cover roughly 482,000 diesel passenger cars sold in the United States since 2009.

Affected diesel models include the Volkswagen Jetta (model years 2009-15), Volkswagen Beetle (model years 2009–15), Audi A3 (model years 2009–15), Volkswagen Golf (model years 2009–15) and Volkswagen Passat (model years 2014-15).

The notice of violation is part of a broader, more aggressive enforcement effort by federal environmental regulators on the auto industry. Analysts said it was meant to send a clear message to automakers that they will be harshly treated for compromising federal rules.

It follows a November 2014 announcement of the administration's largest-ever penalty for a violation of the Clean Air Act, in which the government fined the Korean automakers Hyundai Motor and Kia Motors a combined $300 million as part of a settlement for overstating vehicle fuel-economy standards on 1.2 million cars.

"They want to make it clear that they're going to crack down on cheaters," said Frank O'Donnell, president of the environmental advocacy group Clean Air Watch. "They're cheating not only car buyers but the breathing public. They want to lay down the law, enforce the law, and show they're not going to tolerate cheaters. The laws and regulation are only as good as the enforcement."

The software was designed to conceal the cars' emissions of the pollutant nitrogen oxide, which contributes to the creation of ozone and smog. The pollutants are linked to a range of health problems, including asthma attacks and other respiratory diseases.

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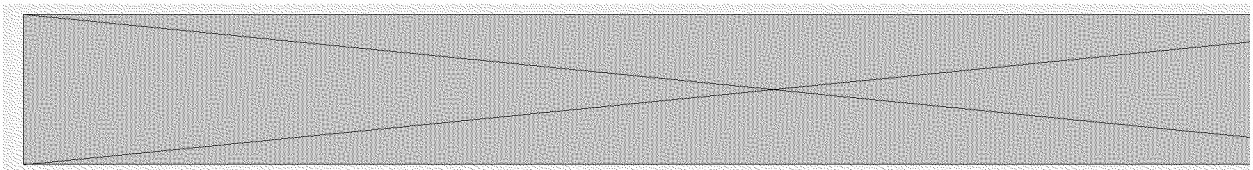
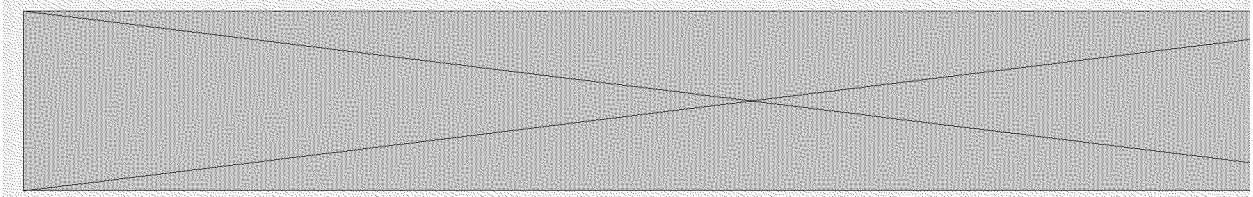
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: The Hill
Sent: Mon 9/21/2015 11:33:51 PM
Subject: Overnight Energy & Environment: Feds launch criminal probe over Volkswagen emissions





CRIMINAL CHARGES FOR VW?: German automaker Volkswagen Group is under criminal investigation by the Justice Department over its efforts to skirt Environmental Protection Agency (EPA) emissions rules.

America has the lowest gasoline prices anywhere in the world. That boosts household budgets by billions of dollars. See how exporting crude would lead to higher fuel prices and hurt our economy. http://crudecoalition.org/resources/studies/

SPONSOR-GENERATED CONTENT

DOJ launched the probe in light of the EPA's revelation Friday that some of Volkswagen's diesel cars were built to comply with pollution rules only when being tested by the EPA, Bloomberg Business reported, based on two federal government sources.

A Justice spokesman declined to comment on the report.

Volkswagen has admitted that it used a "defeat device" to switch emissions controls off for normal use on about 482,000 vehicles sold in the United States since 2009.

On Sunday, Volkswagen chief Martin Winterkorn said he was "deeply sorry" for violating the trust of customers and the public, and the company would commission an external investigation.

Volkswagen's shares plummeted nearly a quarter on Monday. The company faces up to $18 billion in fines under the Clean Air Act.

Read more here.

ON TAP TUESDAY I: Senate Democrats, led by Sen. Maria Cantwell (D-Wash.), will unveil an energy bill Tuesday in a news conference. The lawmakers said Monday that their bill would address "the need for new jobs, updated infrastructure and technological innovation."

ON TAP TUESDAY II: Interior Secretary Sally Jewell, along with western governors and other federal and state officials, will make a "major announcement" regarding the greater sage grouse. The Fish and Wildlife Service, which is part of Interior, is under a Sept. 30 deadline to decide whether the sage grouse warrants a spot on the endangered species list.

NEWS BITE: Oklahoma Attorney General Scott Pruitt has dropped his federal lawsuit attempting to stop the EPA's carbon limits for power plants.

In a court filing on Friday, Pruitt told the Court of Appeals for the 10th Circuit that the EPA plans to publish the final version of the regulation next month, which will allow Oklahoma another chance to file the lawsuit.

"Promulgation of a final rule will vest exclusive jurisdiction over [EPA's] actions in the D.C. Court of Appeals ... and deprive this court of continuing jurisdiction," Pruitt wrote.

Pruitt had sued the EPA in July in a federal district court, and the judge dismissed the lawsuit, because it lacked jurisdiction to hear the premature case.

The 10th Circuit Court rejected an appeal for the same reason.

Numerous states have said they are planning to file suit again as soon as the EPA publishes its rule.

AROUND THE WEB:

Spurred by Pope Francis's encyclical on climate change, Notre Dame University has pledged to stop burning coal for electricity and slash its greenhouse gas emissions, USA Today reports.

The number of government carbon pricing systems worldwide has doubled since 2012, Reuters reports.

IN CASE YOU MISSED IT:

Check out Monday's stories ...

- Volkswagen under criminal probe in EPA emissions case

- Natural gas rule begins final review

- Sage grouse listing decision has Congress aflutter

- Green group: Fossil fuel phase-out possible by 2050

- Week ahead: Pope Francis brings climate message to Congress

Please send tips and comments to Timothy Cama, tcama@thehill.com; and Devin Henry, dhenry@thehill.com. Follow us on Twitter: @Timothy_Cama, @dhenry, @thehill

Forward email

This email was sent to grundler.christopher@epa.gov by newsletters@thehill.com |
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The Hill | 1625 K Street NW | Suite 900 | Washington | DC | 20006

To: Grundler, Christopher[grundler.christopher@epa.gov]; Millett, John[Millett.John@epa.gov]
From: McCabe, Janet
Sent: Mon 9/21/2015 11:38:20 PM
Subject: Fwd: WSJ: DOJ launches criminal probe into Volkswagen allegations

!

Sent from my iPhone

Begin forwarded message:

From: POLITICO Pro <politicoemail@politicopro.com>
Date: September 21, 2015 at 6:30:24 PM EDT
To: <mccabe.janet@epa.gov>
Subject: WSJ: DOJ launches criminal probe into Volkswagen allegations
Reply-To: POLITICO subscriptions <reply-fe8e107571600c7a74-602736_HTML-637935392-1376319-0@politicoemail.com>

WSJ: DOJ launches criminal probe into Volkswagen allegations

By Lauren Gardner

09/21/2015 05:56PM EDT

The Justice Department is conducting a criminal investigation into allegations that Volkswagen knowingly cheated on vehicle emissions tests, The Wall Street Journal reported today.

The department's Environment and Natural Resources Division is investigating the German automaker, the Journal said, citing sources familiar with the case. Bloomberg first reported on the criminal inquiry.

The EPA announced Friday that Volkswagen used "defeat devices" to trick emissions tests for nitrogen oxides, which cause smog. The pollution controls would work during inspections in labs or auto garages, but would then switch off during normal driving conditions, according to the EPA. The environmental regulator called on the company to recall more than 480,000 diesel vehicles manufactured from model years 2009 through 2015.

The department did not immediately respond to a request for comment.

To view online:
https://www.politicopro.com/transportation/whiteboard/2015/09/wsj-doj-launches-criminal-probe-into-volkswagen-allegations-060782

To change your alert settings, please go to https://www.politicopro.com/member/alerts

---

This email was sent to mccabe.janet@epa.gov by: POLITICO, LLC 1000 Wilson Blvd. Arlington, VA, 22209, USA

To: McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Millett, John[Millett.John@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 11:40:33 PM
Subject: Re: WSJ: DOJ launches criminal probe into Volkswagen allegations

Saw this. DOJ talkin

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 7:38 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:

!

Sent from my iPhone

Begin forwarded message:

From: POLITICO Pro <politicoemail@politicopro.com>
Date: September 21, 2015 at 6:30:24 PM EDT
To: <mccabe.janet@epa.gov>
Subject: WSJ: DOJ launches criminal probe into Volkswagen allegations
Reply-To: POLITICO subscriptions <reply-fe8e107571600c7a74-602736_HTML-637935392-1376319-0@politicoemail.com>

WSJ: DOJ launches criminal probe into Volkswagen allegations

By Lauren Gardner

09/21/2015 05:56PM EDT

The Justice Department is conducting a criminal investigation into allegations that Volkswagen knowingly cheated on vehicle emissions tests, The Wall Street Journal reported today.

The department's Environment and Natural Resources Division is investigating the German automaker, the Journal said, citing sources familiar with the case. Bloomberg first reported on the criminal inquiry.

The EPA announced Friday that Volkswagen used "defeat devices" to trick emissions

tests for nitrogen oxides, which cause smog. The pollution controls would work during inspections in labs or auto garages, but would then switch off during normal driving conditions, according to the EPA. The environmental regulator called on the company to recall more than 480,000 diesel vehicles manufactured from model years 2009 through 2015.

The department did not immediately respond to a request for comment.

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https://www.politicopro.com/member/alerts

This email was sent to mccabe.janet@epa.gov by: POLITICO, LLC 1000 Wilson Blvd. Arlington, VA, 22209, USA

To: McCabe, Janet[McCabe.Janet@epa.gov]
From: Grundler, Christopher
Sent: Mon 9/21/2015 11:47:37 PM
Subject: Re: ABC NEWS

Non-Responsive

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 7:36 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:

Non-Responsive

Sent from my iPhone

On Sep 21, 2015, at 7:12 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

I am in DC until about 2pm on Friday

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 5:23 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:

Great!

Non-Responsive

Sent from my iPhone

On Sep 21, 2015, at 4:13 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

Just done with ABC. Liz is happy with it.

Also just did OTR interview w NYT Detroit bureau. Bill Vlasic

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 21, 2015, at 4:22 PM, Millett, John <Millett.John@epa.gov> wrote:

> Yes, it's been steady, but not really breaking much new ground. Backgrounders with Chris and prepared q/a have kept up. Google news shows 1400 articles on the topic, with misc editorials and outlets doing 2-3 updates since Friday to add VW's CEO statement and then the market news.

~~~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822

From: McCabe, Janet
Sent: Monday, September 21, 2015 4:16 PM
To: Millett, John
Cc: Grundler, Christopher; Stewart, Lori
Subject: Re: ABC NEWS

Are we getting a lot of press incoming , John?

Sent from my iPhone
~~~~~~~~~~~~~~~~~~

On Sep 21, 2015, at 2:34 PM, Millett, John <Millett.John@epa.gov> wrote:

Talking with Chris and Liz now. Chris is up for it.

John Millett

202.510.1822

On Sep 21, 2015, at 2:49 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:

I
t

Non-Responsive

I'm fine taping it tomorrow too, but that may be too late

Sent from my iPhone

On Sep 21, 2015, at 12:19 PM, Purchia, Liz <Purchia.Liz@epa.gov> wrote:

Here's some more info.

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Would be really basic questions here are a few in terms of the scope– what are you doing with VW and why? And what is next for consumers?

From: Purchia, Liz
Sent: Monday, September 21, 2015 1:10 PM
To: McCabe, Janet
Subject: FW: ABC NEWS

Hi Janet – Do you have any interest in doing an on-camera interview? I've told them our ability to comment is limited due to the investigation?

If not, would you be open to Chris G. doing one?

Sent from USEPA iPhone

Begin forwarded message:

From: "Steinberger, Daniel" <Daniel.Steinberger@abc.com>
Date: September 21, 2015 at 12:31:33 PM EDT
To: Press <press@epa.gov>
Subject: ABC NEWS

Anybody around for a short interview today on VW for ABC WORLD NEWS TONIGHT.

Please get back to me ASAP.

Thanks,

Daniel Steinberger

ABC NEWS
202-567-8778

Non-Responsive

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Non-Responsive

Sent from my iPhone

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>
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> > ~~~~~~~~~~~~~~~~~~
> >
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> >
> > Director, OAR Communications
> >
> > Desk: 202-564-2903
> >
> > Cell: 202-510-1822
> >
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> > **Sent:** Monday, September 21, 2015 4:16 PM
> > **To:** Millett, John

Cc: Grundler, Christopher; Stewart, Lori
Subject: Re: ABC NEWS

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Sent from my iPhone

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>
> John Millett
>
> 202.510.1822
>
> On Sep 21, 2015, at 2:49 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:
>
> > I'm in Little Rock today, not sure whether Chris is on DC today or not, but I'm fine with him doing this.
> >
> > I'm fine taping it tomorrow too, but that may be too late
> >
> > Sent from my iPhone
> >
> > On Sep 21, 2015, at 12:19 PM, Purchia, Liz <Purchia.Liz@epa.gov> wrote:
> >
> > > Here's some more info.
> > >
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Begin forwarded message:

From: "Steinberger, Daniel" <Daniel.Steinberger@abc.com>
Date: September 21, 2015 at 12:31:33 PM EDT
To: Press <press@epa.gov>
Subject: ABC NEWS

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Thanks,

Daniel Steinberger

ABC NEWS

Ex. 6

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Valentine, Julia[Valentine.Julia@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: StClair, Christie
Sent: Tue 9/22/2015 12:22:29 AM
Subject: Fwd: Volkswagen

Ex. 5

Christie St. Clair

Office of Public Affairs

Environmental Protection Agency

o: 202-564-2880

m: 202-768-5780

Begin forwarded message:

From: Ex. 6
Date: September 21, 2015 at 7:45:26 PM EDT
To: Press <press@epa.gov>
Subject: Volkswagen

HI.. Please, please, do NOT throw the book lightly at VW. I am a 2010 Jetta TDI owner and I bought that car based on the premises VW made. I was lied to and I feel terrible about it since I was trying to reduce my environmental footprint, as I think most TDI owners were/are.
This was intentional, it was collusive, it was deceptive, it was fraudulent... and I hope it's found to be criminal.

If EPA and other regulators do not fine VW close to the maximum how will we ever create a deterrent to similar deception and lies in the future? WE won't. This is how they work with risk management principles. VW analyzed this and took a risk. Make them pay heavily for that decision and make others think differently about doing anything closely resembling it in the future.

Please do not collapse on this.. please.

Thank you,
Ex. 6

To: Wehrly, Linc[wehrly.linc@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Cohen, Janet[cohen.janet@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 12:31:54 AM
Subject: Fwd: Volkswagen

Sent from my iPhone

Begin forwarded message:

From: "StClair, Christie" <StClair.Christie@epa.gov>
Date: September 21, 2015 at 8:22:29 PM EDT
To: "Grundler, Christopher" <grundler.christopher@epa.gov>
Cc: "Valentine, Julia" <Valentine.Julia@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>
Subject: Fwd: Volkswagen

Some nice feedback.

Christie St. Clair

Office of Public Affairs

Environmental Protection Agency

o: 202-564-2880

m: 202-768-5780

Begin forwarded message:

From: Jeff Wilson <Ex. 6
Date: September 21, 2015 at 7:45:26 PM EDT
To: Press <press@epa.gov>
Subject: Volkswagen

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Please do not collapse on this.. please.

Thank you,
Jeff Wilson

To: Grundler, Christopher[grundler.christopher@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Cohen, Janet[cohen.janet@epa.gov]; Cook, Leila[cook.leila@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Hengst, Benjamin
Sent: Tue 9/22/2015 12:56:35 AM
Subject: Fw: Volkswagen case shows EPA enforcement in action

From: POLITICO Pro <politicoemail@politicopro.com>
Sent: Monday, September 21, 2015 8:51 PM
To: Hengst, Benjamin
Subject: Volkswagen case shows EPA enforcement in action

Volkswagen case shows EPA enforcement in action

By Lauren Gardner

09/21/2015 08:27PM EDT

EPA's actions against Volkswagen last week showed the agency's enforcement arm is working, even though it raised some questions about whether its emissions testing regime was rigorous enough to ferret out violators.

After private research groups raised questions about just how clean some of Volkswagen's diesel cars were, federal and California regulators teamed up to investigate. That ultimately led to the accusations against the German manufacturer on Friday of purposefully installing "defeat devices" that turn on pollution-control technologies when the cars are being inspected, only to kill them once the automobile is on the road.

While agency showed it was responsive to the questions raised by independent testing, the revelations did show that EPA's current testing regimen failed to detect a bad player, and raised the issue of whether EPA could feasibly conduct inspections under real-world conditions given the resources at hand.

Laboratory testing is limited in its capacity to replicate real-world conditions. It was the International Council on Clean Transportation that tipped off EPA after testing done by West Virginia University researchers showed that two models of Volkswagens - a Passat and a Jetta - blew emissions limits up to 35 times the standard for nitrogen oxides when monitored on the road.

"On-road testing is pretty important because what you don't want is what you saw here - people gaming their systems to pass a test, allegedly," said Costa Samaras, assistant professor of civil and environmental engineering at Carnegie Mellon University.

It's also expensive, especially since emissions controls degrade as vehicles age, Samaras said. While more in-use testing would be ideal, he said, annual emissions inspections are one of the only ways to get dirty cars off the road.

But if cars can be manufactured to detect when a mechanic is conducting an emissions test and kick on the right controls, how could a local inspections station know when a vehicle is legitimately passing and when it's flouting the law?

"Clearly, the more regulatory agencies, whether in the U.S. or outside, are able to devote resources to real-world testing and comparing the performance with laboratory tests, the better it is," said Anup Bandivadekar, ICCT's passenger vehicle program director.

It's not clear to what extent EPA can inspect vehicles while they're driven in real-world conditions, and EPA did not respond to requests for comment about its plans to ensure vehicles are in compliance with emissions standards in light of the Volkswagen findings.

But Bandivadekar praised EPA and California's Air Resources Board for their "dogged pursuit" of the reasons for the discrepencies that Volkswagen vehicles showed between tests in the lab and on the road.

"I would not call into question the current framework," he said of the EPA process.

The EPA has urged Volkswagen to recall nearly half a million vehicles containing the device. The automaker could be subject to fines as high as $18 billion if the federal government were to impose the maximum penalty on each of the approximately 482,000 cars involved.

The company admitted that the software to deceive the tests was knowingly programmed into the cars, but only after EPA threatened to not certify the automaker's 2016 diesel models under the Volkswagen and Audi brands, the New York Times reported Monday. The House Energy and Commerce Committee's oversight panel is planning a hearing within the next few weeks on the allegations.

EPA says the VW cars were violating the emissions limits for nitrogen oxides, which cause smog, as well as fine particulate matter, both of which are linked to increased asthma attacks and respiratory illnesses.

"No penalty is large enough to impose the kind of deterrent that's necessary," said Bill Becker, executive director of the National Association of Clean Air Agencies.

Becker said EPA's findings show that setting standards alone isn't enough to achieve reductions in harmful air pollution - regulators need a healthy budget to ensure those requirements are met. EPA's budget is a perennial target for cuts by congressional appropriators.

"It takes implementation, and it takes enforcement, and it takes cooperation, and it takes resources," he said.

To Samaras, the Volkswagen allegations raise questions about a broader issue: how federal and state regulators can ensure vehicles are meeting emissions standards when technological advances in automation and alternative fuels are rippling throughout the sector.

Pollution standards set by the EPA and California have long dictated how the world's automakers innovate, which is why EPA's response must be "transparent" and "real," Samaras said. Otherwise, more manufacturers may decide that working within the confines of that system is no longer advantageous.

"What's important is that automakers are competing for that market share on a level playing field," he said.

Jennifer Scholtes contributed to this story.

To view online:
https://www.politicopro.com/transportation/story/2015/09/pro-transportation-volkswagen-gardner-054990

To change your alert settings, please go to
https://www.politicopro.com/member/alerts

This email was sent to Hengst.Benjamin@epa.gov by: POLITICO, LLC 1000 Wilson Blvd. Arlington, VA, 22209, USA

Ex. 5

Ex. 5

Ex. 5

Begin forwarded message:

From: "Valentine, Julia" <Valentine.Julia@epa.gov>
Date: September 21, 2015 at 8:48:28 PM EDT
To: "Purchia, Liz" <Purchia.Liz@epa.gov>, "Conger, Nick" <Conger.Nick@epa.gov>
Cc: "Millett, John" <Millett.John@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Senn, John" <Senn.John@epa.gov>, "Hull, George" <Hull.George@epa.gov>
Subject: Bloomberg re: seeking to confirm Det News re: EPA expanding investigation

---

From: Jeff Plungis (BLOOMBERG/ NEWSROOM:) <jplungis@bloomberg.net>
Sent: Monday, September 21, 2015 8:41 PM
To: Valentine, Julia
Subject: Re:EPA response

Julia:

Thanks for the response. We got the EPA comments in the story.

On another question, the Detroit News is reporting that EPA told them the VW investigation is expanding to include the 3.0 liter diesel engine used by Audi and in the Porsche Cayenne SUV. Can you confirm?

Jeff Plungis
Bloomberg News
1399 New York Avenue, NW
Washington, DC 20005
202/624-1835 (direct)
202/744-9768 (mobile)
jplungis@bloomberg.net
Twitter: @jplungis

From: Valentine.Julia@epa.gov At: Sep 21 2015 18:15:52

To: JEFF PLUNGIS (BLOOMBERG/ NEWSROOM:)
Subject: Re:EPA response

Hi Jeff.

Sorry this took a bit.

Responses below attributable to EPA spokesperson. If you need a specific name you may use Liz Purchia.

-- Can you point me to any kind of overview on how the EPA recall process works?

EPA did not issue a recall or require VW to implement one when it issued the Notice of Violation on Friday. **(OTAQ can add more about recall if we want)**

-- Are there any recent recent examples involving other automakers on a compliance issue of this scale?

We have seen manufacturers installing defeat devices before. For example, a 1998 settlement and consent decree resolved alleged Clean Air Act violations related to installing defeat devices in many large truck engines throughout the 1990s. There are no recent similar cases to compare this to. Recent defeat device cases – within the last 10 years or more – have dealt with aftermarket installation.

-- Anything you can tell us about timing with VW, how soon a recall could be ordered?

EPA expects to compel VW to issue a recall in the future to reduce the emissions impacts of these vehicles. Owners will be notified of that recall once Volkswagen and Audi have developed a remedial plan and EPA has approved the plan. Manufacturers are given a reasonable amount of time to develop a plan to complete the repairs, including both the repair procedure and manufacture of any needed parts.

-- Could you order consumers to be compensated, aside from a free repair?

Federal courts can order equitable remedies in enforcement cases under the Clean Air act. The case is under investigation and that includes what remedies would be appropriate to seek.

-- Are you considering ordering VW to do more than a recall, in order to to compensate for the environmental damage of all the years of non-compliant cars?

EPA will require VW to remedy the noncompliance. Determinations regarding potential penalties and other remedies will be assessed as part of the investigation EPA has opened in conjunction with the U.S. Department of Justice.

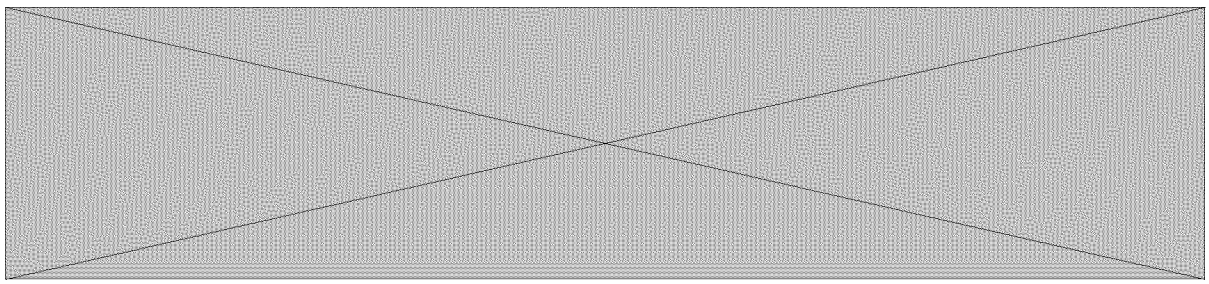
-- Some consumers probably won't want to do the repairs, especially if the reprogramming affects the cars' fuel economy or performance. Would the agency factor that in as it considers an appropriate remedy for VW?

Some states require proof that emissions recalls have been performed prior to issuing the vehicle registration. Even in states that do not have this requirement, it is important to have emissions recalls performed because without the repairs, vehicles may be emitting harmful pollutants in excess of the federal emission standards.

Sent from USEPA iPhone

Ex. 5, 7

From: Energy and Commerce News
[mailto:ECNews@ECREP.housecommunications.gov]
Sent: Monday, September 21, 2015 4:44 PM
To: Spencer, Peter
Subject: Volkswagen Hearing



FOR IMMEDIATE RELEASE
September 21, 2015

CONTACT: Press Office
(202) 226-4972

Upton, Murphy Announce Hearing on Volkswagen Emissions Issues

WASHINGTON, DC – House Energy and Commerce Committee Chairman Fred Upton (R-MI) and Oversight and Investigations Subcommittee Chairman Tim Murphy (R-PA) today announced that the Oversight and Investigations Subcommittee will hold a hearing in the coming weeks on recently discovered issues with Volkswagen diesel engines (sold from 2008-2015) that resulted in emissions levels exceeding state and federal limits throughout the United States.

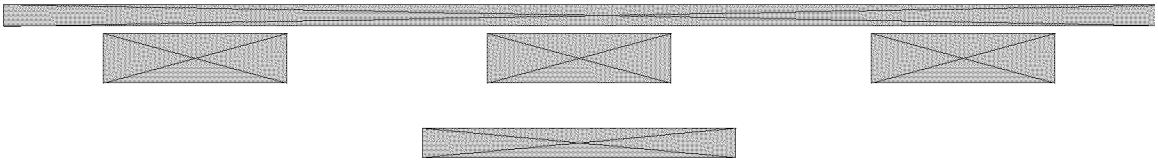
"Strong emissions standards are in place for the benefit of public health. Manufacturers throughout the United States, and across the world, have developed leading technologies to reduce airborne emissions within the limits set by EPA and state environmental agencies.

However, reported EPA allegations that certain Volkswagen models contained software to defeat auto emissions tests raise serious questions," said **Upton and Murphy.** "We will follow the facts. We are also concerned that auto consumers may have been deceived – that what they were purchasing did not come as advertised. The American people deserve answers and assurances that this will not happen again. We intend to get those answers."

More information about the Oversight and Investigation Subcommittee's hearing, including date, time, a background memo, and witness list and testimony, will be posted here as they are available.

###

PERMALINK



Manage Preferences | Unsubscribe | Help

This email was sent to peter.spencer@mail.house.gov using GovDelivery, on behalf of: House Committee on Energy and Commerce · 2125 Rayburn House Office Building, Washington, DC 20515

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Non-Responsive
Sent: Tue 9/22/2015 1:55:50 AM
Subject: VW Notice of Violations - 2012 & 2013 Passat

Hi Ms. Kaul,

Regarding the VW Notice of Violations, there is inconsistent reporting by the EPA regarding impacted Passat model years. This is currently being picked up by the greater press.

Here the EPA states the Passat MY 2012 and 2013 are not affected:
http://yosemite.epa.gov/opa/admpress.nsf/6424ac1caa800aab85257359003f5337/dfc8e33b5ab162b985257ec40057813b!OpenDocument

Here the EPA states the Passat MY 2012 and 2013 are affected within the NOV:
http://www3.epa.gov/otaq/cert/documents/vw-nov-caa-09-18-15.pdf

Any effort to have your staff provide clarification would be appreciated as I am unsure if my own 2012 Passat is impacted.

Thank you for your time and consideration.

Non-Responsive

Ex. 5

Ex. 5

Ex. 5

From: Valentine, Julia
Sent: 9/21/2015 8:48 PM
To: Purchia, Liz; Conger, Nick

Cc: Millett, John; Birgfeld, Erin; Senn, John; Hull, George
Subject: Bloomberg re: seeking to confirm Det News re: EPA expanding investigation

---

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1399 New York Avenue, NW
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202/744-9768 (mobile)
jplungis@bloomberg.net
Twitter: @jplungis

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Sent from USEPA iPhone

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Werner, Jacqueline
Sent: Tue 9/22/2015 3:01:29 AM
Subject: Fwd: Bloomberg reporting on Criminal investigation on VW

Sorry. I meant to include you.

Thanks,
jj

Sent from my iPhone
Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

Begin forwarded message:

From: "Werner, Jacqueline" <Werner.Jacqueline@epa.gov>
Date: September 21, 2015 at 6:44:53 PM EDT
To: Phillip Brooks <Brooks.Phillip@epa.gov>
Cc: Evan Belser <Belser.Evan@epa.gov>
Subject: FW: Bloomberg reporting on Criminal investigation on VW

FYI.

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

WJCS-1117C (MC-2242A)

Washington, DC 20460

t: 202-564-1036

From: Starfield, Lawrence
Sent: Monday, September 21, 2015 6:34 PM
To: Belser, Evan; Werner, Jacqueline; Kelley, Rosemarie
Subject: FW: Bloomberg reporting on Criminal investigation on VW
Importance: High

FYI.

Sent from my Windows Phone

From: Conger, Nick
Sent: 9/21/2015 3:00 PM
To: Giles-AA, Cynthia; Wilson, Shari; Starfield, Lawrence; Barnet, Henry; Parker, Doug; Mazakas, Pam
Subject: FW: Bloomberg reporting on Criminal investigation on VW

FYI

-----Original Message-----
From: Birgfeld, Erin
Sent: Monday, September 21, 2015 2:58 PM
To: Purchia, Liz; Grundler, Christopher; Valentine, Julia; Senn, John; Conger, Nick
Cc: Bunker, Byron
Subject: Bloomberg reporting on Criminal investigation on VW
Importance: High

http://www.bloomberg.com/news/articles/2015-09-21/volkswagen-said-to-be-target-of-u-s-criminal-probe-on-emissions

The U.S. Justice Department is conducting a criminal investigation of Volkswagen AG's admission to cheating on federal air pollution tests, according to two U.S. officials familiar with the inquiry.
Volkswagen said last week it's cooperating with regulators probing gaps between emissions on the road and lab tests on some diesel models. The U.S. officials described the inquiry on condition of anonymity because it's a continuing investigation.
Volkswagen plunged as much as 23 percent Monday to 125.40 euros in Frankfurt, wiping out about 15.6 billion euros ($17.6 billion) in market value. The stock closed at 132.2 euros, its lowest in more than three years.

Justice Department spokesman Wyn Hornbuckle declined to comment.

Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
To: Purchia, Liz[Purchia.Liz@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 3:32:19 AM
Subject: It Took E.P.A. Pressure to Get VW to Admit Fault - NYTimes.com

This turned out alright

http://mobile.nytimes.com/2015/09/22/business/it-took-epa-pressure-to-get-vw-to-admit-fault.html?referrer=

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Ex. 6
Sent: Tue 9/22/2015 4:36:17 AM
Subject: Proud of the EPA

Mr. Meetu,

I am a Chemical Engineer employed as an air quality specialist for Ex. 6 environmental consulting firm, and would like to start this email off by saying thank you to yourself and everyone on your staff for your hard work to uncover the Volkswagen emission deception. It is thanks to people like you that progress can be made towards attainment with NAAQS from coast-to-coast. This level of willful, malignant deception must be punished to the fullest extent allowable under the CAA.
Please continue to do everything possible to prevent this outrage from ever being financially beneficial to any automaker in the future. The American People are relying on your action on this matter, and I would very much so like to thank you for your actions.

Regards,
Ex. 6

To: Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 5:55:36 AM
Subject: FT Editorial

@FT: FT View on VW's scandal: No one accidentally installs software designed to fool the regulator http://t.co/i1VPeTY6cD http://t.co/2dzDVrkyiE

Christopher Grundler, Director
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To: Kaul, Meetu[Kaul.Meetu@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
Cc: Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]
From: Shinkman, Susan
Sent: Tue 9/22/2015 6:18:35 AM
Subject: Fwd: Volkswagen TDI Recall Penalty Proposal

FYI. I assume someone is handling these centrally.
Thanks,Susan

Sent from my iPhone

Begin forwarded message:

From: Ex. 6
Date: September 22, 2015 at 1:22:57 AM GMT+2
To: <kelley.rosemarie@epa.gov>, <giles-aa.cynthia@epa.gov>, <starfield.lawrence@epa.gov>, <lee.charles@epa.gov>, <shinkman.susan@epa.gov>, <stewart.andrew@epa.gov>, <norris.tom@epa.gov>, <fisher.mike@epa.gov>
Cc: <kkiely@nrdc.org>, <Jerry.hirsch@latimes.com>
Subject: Volkswagen TDI Recall Penalty Proposal

Dear EPA,

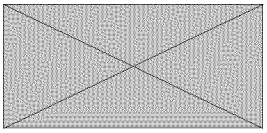
Recently I became aware of the issue regarding Volkswagen having created an emissions defeat device on my 2009 Volkswagen TDI. If my car's emissions system is fixed under the recall, I will have a poorer performance and mileage profile; I won't get the originally claimed mileage and performance as one package. Additionally, the value of my car will decrease.

Rather than the EPA setting the fine of $35,000, I propose that the EPA negotiate to allow VW buy back vehicles from owners at MSRP (most TDI models are less than $35,000) and destroy them. This would likely take a greater portion of the gross polluting vehicles off of the road than the monetary fine because cars that don't go to the dealership will not receive a recall repair; those current owners would need this incentive to make the repair. This would also allow the original purchasers to purchase newer, cleaner vehicles.

Thank You,

Ex. 6

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Environmental Law360
Sent: Tue 9/22/2015 7:31:37 AM
Subject: The 4 Firms In-House Counsel Fear The Most



ENVIRONMENTAL

Tuesday, September 22, 2015

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over a foreign subsidiary in the United States based on its U.S. parent's jurisdictional contacts, even where the alleged conduct by the subsidiary occurred abroad, provided the plaintiff can establish the parent and subsidiary are alter egos, say William Thomson and Dylan Mefford of Gibson Dunn & Crutcher LLP.

LEGAL INDUSTRY

How To Cash In On 1st Uptick In Litigation Spending In 5 Years

While 2016 is expected to bring the first increase in litigation spending in five years, those looking to cash in should know the litigation market remains one of the most competitive ever because clients are settling cases faster and earlier and there are fewer matters to go around to the firms vying for work.

4 Firms Are GCs' Faves For IP Litigation

Thanks to their deep understanding of how intellectual property cases can impact their clients' bottom lines, four firms are most sought after by general counsels facing important IP litigation, according to a new survey.

3 Firms Are Top Picks For GCs Facing Securities Suits

Three familiar BigLaw firms have separated themselves from the competition for high-stakes securities and finance work, becoming the go-to pick for corporate clients in need of outside legal help, according to a new survey of general counsels.

3 Firms Are GCs' Faves For Employment Litigation

A trio of go-to firms are called on by general counsels looking to fend off the employment suits that affected more than 90 percent of their companies last year, according to a recent survey.

3 Firms Are GCs' Top Picks For Product Liability Litigation

General counsels named three firms as powerhouses in product liability litigation in a recent survey, selecting firms with long histories of success in the practice area and reputations for developing big-picture strategies for their clients.

Pro Bono Firm Of 2015: WilmerHale

WilmerHale's pro bono victories this year underscored its longtime status as a standout in the sphere of giving back, including exonerations in death penalty cases and using a new California statute to create case law enabling nonviolent offenders to avoid life-altering "third strikes," landing it on Law360's Pro Bono Firms of 2015.

Trial Ace: Hardin & Associates' Rusty Hardin

With mediation and arbitration on the rise, some legal experts say taking a dispute to trial is generally a waste of money and time. But Rusty Hardin, the Texas trial veteran with a national reputation for winning over juries in both civil and criminal cases, isn't buying it.

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Dewey Jury Gets 'All The Emails,' Asks If Falsity Is Illegal

Jurors in the trial of the former Dewey & LeBoeuf LLP executives accused of defrauding the firm's lenders and investors on Monday requested to review the massive amount of email evidence introduced at trial, and asked probing questions about the criminality of suspect accounting.

Judge's Lies May Raise Standards For Court Discipline

Revelations that now-resigned Alabama federal judge Mark Fuller repeatedly lied to investigators who found "substantial evidence" of a pattern of violence against his wife will prompt chief justices to tighten disciplinary standards and eschew some informal avenues for handling problem judges, experts said.

Howrey Creditors Settle With Arent Fox Partner

The unsecured creditors committee for defunct law firm Howrey LLP told a California federal bankruptcy judge on Monday that it has reached a proposed settlement resolving an adversary complaint that sought funds received by a former partner and current Arent Fox LLP partner.

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& Polsce

Greenb Traurig

Hagens Berma

Hogan Lovells

Hollanc & Hart

Jackso Gilmou

Jackso Kelly

Jackso Lewis

Jackso Walker

Jenner & Block

Jones Day

Karbal Cohen

Katten Muchin

Keller Rohrba

Kilpatri Townse

Kirklan & Ellis

Littler Mende

McCun

LLP

McGuir

Miller
Nash

Morrisc
&
Foerste

Morvillo
Abramo

Native
Americ
Rights
Fund

Nixon
Peabo

Ogletre
Deakin

Parson
Farnell

Paul
Weiss

Pillsbu
Winthr

Polsine

Quinn
Emanu

Redwir
&
Sherrill

Rusty
Hardin

Schwal
William

Shipma
&
Goodw

Sidley Austin

Sirote & Permut

Skadde

Soha & Lang

Vinson & Elkins

Whitefc Taylor

Wiley Rein

William & Connol

Wilmer

COMP/

AGL Resour Inc.

BAE Syster

BTI Consul Group Inc.

Bayer AG

Bayer CropSc Ltd.

Biomet Inc.

Boston
Scientif
Corpor

Citigrou
Inc.

Daimle
AG

Domini
Resour
Inc.

Duke
Energy
Corpor

Goodye
Tire &
Rubber
Co.

Hallibu
Compa

HealthS
Corpor

Housto
Rocket

Major
League
Baseba
Inc.

Minnes
Vikings

Nationa
Gypsur
Co.

Natural
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Counci

NiSour
Inc.

Nike

Inc.

Piedmc
Natural
Gas
Co
Inc.

Sierra
Club

Tramm
Crow
Compa

Union
Pacific
Corpor

VCG
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Corp.

Volksw

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eBay
Inc.

GOVEF
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Bureau of Indian Affairs

Bureau of Land Manag

Departı of Agricul

Departı of Labor

Departı of the Interior

Enviror Protect Agency

Equal Employ Opport Commi

Federa Energy Regula Commi

Fish and Wildlife Service

Food and Drug Admini

Little River Band of Ottawa Indians

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LAW FIRMS
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Bracewell & Giuliani

Dewey & LeBoeuf

Gibson Dunn

Jackson Gilmour

Kirkland & Ellis

Littler Mendelson

Ogletree Deakins

Skadden

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Clausen Miller

Clyde & Co

Cozen O'Connor

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Davis Rothwell

Earthjustice

Epstein Becker Green

Faegre Baker

Finnegan

Foley & Lardner

Girard Gibbs

Gordon & Polscer

Greenberg Traurig

Hagens Berman

Hogan Lovells

Holland & Hart

Jackson Kelly

Jackson Lewis

Jackson Walker

Jenner & Block

Karbal Cohen

Katten Muchin

Keller Rohrback

Kilpatrick Townsend

McCuneWright LLP

McGuireWoods

Miller Nash

Morrison & Foerster

Morvillo Abramowitz

Native American Rights Fund

Nixon Peabody

Parsons Farnell

Paul Weiss

Pillsbury Winthrop

Polsinelli

Quinn Emanuel

Redwine & Sherrill

Rusty Hardin

Schwabe Williamson

Shipman & Goodwin

Sidley Austin

Sirote & Permutt

Soha & Lang

Vinson & Elkins

Whiteford Taylor

Wiley Rein

Williams & Connolly

WilmerHale

COMPANIES
BTI Consulting Group Inc.

Natural Resources Defense Council

Volkswagen

AGL Resources Inc.

BAE Systems

Bayer AG

Bayer CropScience Ltd.

Biomet Inc.

Boston Scientific Corporation

Citigroup Inc.

Daimler AG

Dominion Resources, Inc.

Duke Energy Corporation

Goodyear Tire & Rubber Co.

Halliburton Company

HealthSouth Corporation

Houston Rockets

Major League Baseball Inc.

Minnesota Vikings

National Gypsum Co.

NiSource Inc.

Nike Inc.

Piedmont Natural Gas Co Inc.

Sierra Club

Trammell Crow Company

Union Pacific Corporation

VCG Holding Corp.

WPX Energy Inc.

eBay Inc.

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U.S. Department of Justice

U.S. Supreme Court

Environmental Protection Agency

Equal Employment Opportunity Commission

Bureau of Land Management

Federal Energy Regulatory Commission

National Labor Relations Board

Agua Caliente Band of Cahuilla Indians

Animal and Plant Health Inspection Service

Army Corps of Engineers

Bureau of Indian Affairs

Department of Agriculture

Department of Labor

Department of the Interior

Fish and Wildlife Service

Food and Drug Administration

Little River Band of Ottawa Indians

Securities and Exchange Commission

U.S. Army

U.S. Customs and Border Protection

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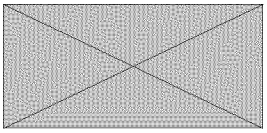
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Environmental Law360
Sent: Tue 9/22/2015 7:34:07 AM
Subject: The 4 Firms In-House Counsel Fear The Most



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LEGAL INDUSTRY

How To Cash In On 1st Uptick In Litigation Spending In 5 Years

While 2016 is expected to bring the first increase in litigation spending in five years, those looking to cash in should know the litigation market remains one of the most competitive ever because clients are settling cases faster and earlier and there are fewer matters to go around to the firms vying for work.

4 Firms Are GCs' Faves For IP Litigation

Thanks to their deep understanding of how intellectual property cases can impact their clients' bottom lines, four firms are most sought after by general counsels facing important IP litigation, according to a new survey.

3 Firms Are Top Picks For GCs Facing Securities Suits

Three familiar BigLaw firms have separated themselves from the competition for high-stakes securities and finance work, becoming the go-to pick for corporate clients in need of outside legal help, according to a new survey of general counsels.

3 Firms Are GCs' Faves For Employment Litigation

A trio of go-to firms are called on by general counsels looking to fend off the employment suits that affected more than 90 percent of their companies last year, according to a recent survey.

3 Firms Are GCs' Top Picks For Product Liability Litigation

General counsels named three firms as powerhouses in product liability litigation in a recent survey, selecting firms with long histories of success in the practice area and reputations for developing big-picture strategies for their clients.

Pro Bono Firm Of 2015: WilmerHale

WilmerHale's pro bono victories this year underscored its longtime status as a standout in the sphere of giving back, including exonerations in death penalty cases and using a new California statute to create case law enabling nonviolent offenders to avoid life-altering "third strikes," landing it on Law360's Pro Bono Firms of 2015.

Trial Ace: Hardin & Associates' Rusty Hardin

With mediation and arbitration on the rise, some legal experts say taking a dispute to trial is generally a waste of money and time. But Rusty Hardin, the Texas trial veteran with a national reputation for winning over juries in both civil and criminal cases, isn't buying it.

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Dewey Jury Gets 'All The Emails,' Asks If Falsity Is Illegal

Jurors in the trial of the former Dewey & LeBoeuf LLP executives accused of defrauding the firm's lenders and investors on Monday requested to review the massive amount of email evidence introduced at trial, and asked probing questions about the criminality of suspect accounting.

Judge's Lies May Raise Standards For Court Discipline

Revelations that now-resigned Alabama federal judge Mark Fuller repeatedly lied to investigators who found "substantial evidence" of a pattern of violence against his wife will prompt chief justices to tighten disciplinary standards and eschew some informal avenues for handling problem judges, experts said.

Howrey Creditors Settle With Arent Fox Partner

The unsecured creditors committee for defunct law firm Howrey LLP told a California federal bankruptcy judge on Monday that it has reached a proposed settlement resolving an adversary complaint that sought funds received by a former partner and current Arent Fox LLP partner.

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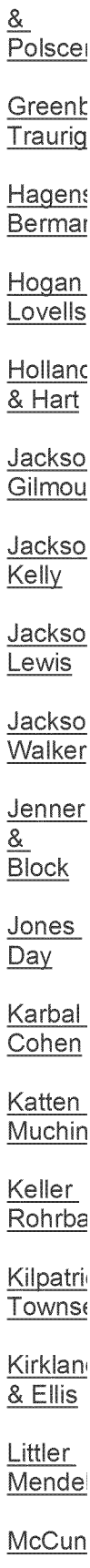
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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Non-Responsive
Sent: Tue 9/22/2015 10:05:16 AM
Subject: Re: A ? For u as what to do

Thanks
Strong work

Sent from my iPhone

> On Sep 21, 2015, at 2:57 PM, Kaul, Meetu <Kaul.Meetu@epa.gov> wrote:
>
> Hello,
>
> Thank you for your email. The EPA is currently investigating this matter, including what an appropriate remedy may be for alleged violations. I don't have any further information on potential remedies at this time. However, EPA enforcement case resolutions generally do not include any kind of compensation for customers as may be available with private lawsuits like class actions.
>
> Sorry I don't have more information for you. The information we do have can be found at:
>
> http://www3.epa.gov/otaq/cert/violations.htm
>
> Regards,
> Meetu Kaul
>
> _____
> Ms.Meetu Kaul, Attorney-Advisor
> National Marine Enforcement Coordinator
> United States Environmental Protection Agency
> Office of Civil Enforcement - Air Enforcement Division
> WJC South, Room 1117B
> 1200 Pennsylvania Ave., N.W. (MC 2242A)
> Washington D.C. 20460 (Courier 20004)
> Direct: 202-564-5472
> Fax: 202-564-0069
> Email: kaul.meetu@epa.gov
>
>
>
>
>
> -----Original Message-----
> From: Non-Responsive
> Sent: Sunday, September 20, 2015 11:31 PM
> To: Kaul, Meetu
> Subject: A ? For u as what to do
>
> So I was one the many who researched and thought about it - and decided on Clean Diesel. I owned 2 Audi diesels. The Q7 (that we just got rid of) and the A3 that we still have/own. We get sometimes 42mpg on it. I occasionally wondered how the Q7 required the adblue and the A3 didn't. If you could get a diesel to pass inspections without the adblue why bother making a car that requires it? Now the truth is out and a recall initiated. A diesel engine without the adblue is a scam and they lied.
>
> So now the A3 I paid off and was planning driving into the ground with it's good performance, excellent gas mileage and "green emissions" is worthless. No resale value whatsoever.

>
> What kind of fix can they make anyway on recall? If the engine could perform under code they would have allowed it. The one possible fix to keep emissions down will be to reduce the engine performance (probably to unrealistic driving levels).
>
> So I know a few smart people and will pose the question - what are they going to do?
> What can I do?
> The Huffington post says call and ask for a loaner now. Is that realistic? How hard should we - could we push on that call?
>
> Is Vw/audi going to have to give refunds on 480000 cars - there is no fix?
> It's not a ignition thing or an airbag thing. It's not going to risk killing you in an instant. But they lied and there is no realistic fix.
>
> I----that was a post I made - i am curious as to what you would say
>
>
> Thank u
>
> **Non-Responsive**
>
> Sent from my iPhone

To: Shinkman, Susan[Shinkman.Susan@epa.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]; Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Belser, Evan
Sent: Tue 9/22/2015 10:38:59 AM
Subject: Re: Volkswagen TDI Recall Penalty Proposal

Although this particular email is different than the others, yes, we are handling consumer questions. We are directing people to the website with consumer information and I am serving as a point of contact. Many of the calls take only a minute or two, and I'm able to convey information we already made public and that has been satisfactory. Many are pleased just to get a call back.

I will call this person back as I have for the others.

Evan Belser
Chief, Mobile Source Enforcement Branch
US EPA

On Sep 22, 2015, at 2:18 AM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

> FYI. I assume someone is handling these centrally.
> Thanks,Susan
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> **From:** Jonathan Lea <Ex. 6
> **Date:** September 22, 2015 at 1:22:57 AM GMT+2
> **To:** <kelley.rosemarie@epa.gov>, <giles-aa.cynthia@epa.gov>, <starfield.lawrence@epa.gov>, <lee.charles@epa.gov>, <shinkman.susan@epa.gov>, <stewart.andrew@epa.gov>, <norris.tom@epa.gov>, <fisher.mike@epa.gov>
> **Cc:** <kkiely@nrdc.org>, <Jerry.hirsch@latimes.com>
> **Subject: Volkswagen TDI Recall Penalty Proposal**
>
> Dear EPA,
>
> Recently I became aware of the issue regarding Volkswagen having created an

emissions defeat device on my 2009 Volkswagen TDI. If my car's emissions system is fixed under the recall, I will have a poorer performance and mileage profile; I won't get the originally claimed mileage and performance as one package. Additionally, the value of my car will decrease.

Rather than the EPA setting the fine of $35,000, I propose that the EPA negotiate to allow VW buy back vehicles from owners at MSRP (most TDI models are less than $35,000) and destroy them. This would likely take a greater portion of the gross polluting vehicles off of the road than the monetary fine because cars that don't go to the dealership will not receive a recall repair; those current owners would need this incentive to make the repair. This would also allow the original purchasers to purchase newer, cleaner vehicles.

Thank You,

Ex. 6

Ex. 6

Cell: Ex. 6

Email: Ex. 6

To: Grundler, Christopher[grundler.christopher@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: McCabe, Janet
Sent: Tue 9/22/2015 11:00:34 AM
Subject: Fwd: Latest VW news

More news from VW

Sent from my iPhone

Begin forwarded message:

From: "Reynolds, Thomas" <Reynolds.Thomas@epa.gov>
Date: September 22, 2015 at 6:57:26 AM EDT
To: "Adm13McCarthy, Gina" <Adm13McCarthy.Gina@epa.gov>
Cc: "Purchia, Liz" <Purchia.Liz@epa.gov>, "McCabe, Janet" <McCabe.Janet@epa.gov>
Subject: Fwd: Latest VW news

FYI

Begin forwarded message:

From: Tom Reynolds <threynolds9@gmail.com>
Date: September 22, 2015 at 6:56:23 AM EDT
To: reynolds.thomas@epa.gov
Subject: Latest VW news

Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

• • •

By JACK EWING

SEPTEMBER 22, 2015

FRANKFURT — Volkswagen said on Tuesday that 11 million diesel cars worldwide were equipped with the same software that was used to cheat on emissions tests in the United States. The company issued a de facto profit warning because of the costs of repairing vehicles to comply with pollution standards.

The statement was the carmaker's first admission that diesel cars outside the United States may have the software that led the Environmental Protection Agency to accuse

the carmaker of deliberately evading pollution tests. Previously, the company had acknowledged only that the problem affected about 500,000 vehicles in the United States.

Volkswagen said it would set aside 6.5 billion euros, or about $7.3 billion, to cover the cost of servicing the affected vehicles "and other efforts to win back the trust of our customers." The money would be booked in the third quarter, Volkswagen said.

The German carmaker said that "a noticeable deviation between bench-test results and actual road use was established" for 11 million so-called Type EA 189 engines.

To: Bunker, Byron[bunker.byron@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Millett, John[Millett.John@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; Blubaugh, Jim[Blubaugh.Jim@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 11:11:50 AM
Subject: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

http://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share

The company said that the software that let its diesel car engines defeat emissions tests was used worldwide, and that it had set aside about $7.3 billion to fix vehicles.

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Purchia, Liz[Purchia.Liz@epa.gov]; Reynolds, Thomas[Reynolds.Thomas@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 11:12:14 AM
Subject: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

http://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share

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Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: EnergyGuardian
Sent: Tue 9/22/2015 11:12:45 AM
Subject: Report paints bullish picture for residential natural gas growth

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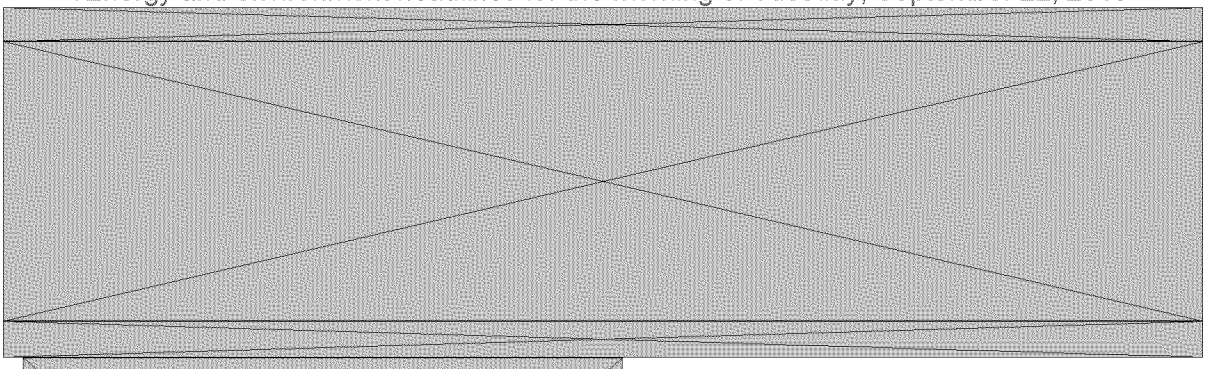
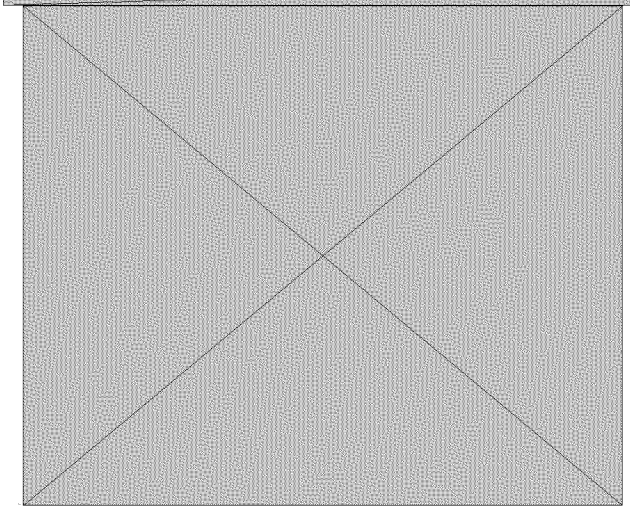
Energy and environment headlines for the morning of Tuesday, September 22, 2015





Report paints bullish picture for residential natural gas growth

By Kevin Rogers

Despite increased building and appliance efficiency and federal projections to the contrary, natural gas distribution is well positioned to continue growing in the coming decades, an industry group says in a new report.

The analysis, unveiled Monday by the American Gas Association, which represents more than 200 natural gas companies, examined eight trends in the residential gas sector, including

a greater number of households and appliances powered by natural gas, expanded distribution infrastructure and potential for greenhouse gas reductions.

The finding clashes with the forecast made in the Energy Information Administration's Annual Energy Outlook, which projects in its reference, or most-likely, case that residential gas consumption would decline from 2015 to 2040, as buildings become more efficient, prices increase and population shifts require less gas for heating.

EIA's outlook did project a growth in natural gas demand for electricity generation and the industrial and commercial sectors. However, it was released before the Environmental Protection Agency's final Clean Power Plan, which set a more aggressive growth path for renewables at the expense of gas.

AGA, however, said the EIA report, and others like it, failed to examine multiple avenues for natural gas utility growth and put too much focus on volume demanded. The AGA report, instead, suggested that overall consumption would rise as distribution expanded.

"We looked beyond the simple metric of aggregate volume delivered in the national gas market and examined areas where we have seen dynamic growth in the gas utility sector," AGA Vice President of Policy Analysis Chris McGill said in a statement.

"Many volume-based natural gas supply and demand balance forecasts do not include other very tangible growth factors such as efficiency gains and related dollar investments, system footprint outgrowth, customer totals, additions of burner tips and the growing benefits of CO2 reductions," he continued.

The analysis pointed to a rapid rate in natural-gas conversions, either through new housing construction or conversion of existing heating systems from electricity, heating oil or propane, as an indicator of future growth.

From 1970 to 2013, the industry added more than 26 million households, according to Energy Department data. In addition, according to AGA customer data, conversions of existing heating systems have expanded at a steady clip over the past decade.

AGA also projected growth potential through increased use of gas-fired appliances, noting that most new homes constructed feature multiple units, be they water and space heaters, clothes driers or cooking units. It forecasted that the U.S. could add up to 33 million such appliances by 2040, bringing total in-use appliances to 210 million.

The growth in the number of households reliant on natural gas for heating has also increased the "geographical footprint" of the industry, as new pipeline infrastructure could supply more remote rural areas. While the report acknowledged that the new pipeline development has increased costs to the industry, the new markets may open the door for more demand.

The expanded infrastructure, the report added, has helped to boost companies' financial value and holdings. The GASFX, a stock fund of AGA members, has continued to outpace the

S&P index in growth over the last decade.

The report also makes a carbon reduction case for sector growth, nothing that when burned, natural gas produces fewer greenhouse gas emissions than heating oil, electric furnaces, or air source heat pumps. It also touted expansion in both residential efficiency programs and system-wide cuts in methane emissions as a further boost in the fuel source's climate credentials.

The report comes as the Obama administration looks to impose strong methane controls on the oil and gas industry as part of a larger effort to cut energy-sector methane emissions by up to 45 percent over the next decade.

The rules, proposed last month by the Environmental Protection Agency, would only apply to new infrastructure and facilities. While the oil and gas industries argued that the rules were unnecessary, given voluntary efforts to scale back emissions, environmental groups are pressing for the rules to apply to existing sites.

The agency will hold its first public hearings on the proposed standards in Denver and Dallas on Wednesday.

The administration is also moving to limit gas flaring from production sites on federal land with a proposed rule from the Bureau of Land Management submitted for White House review.

Quick Links

Clean tech a top priority as Chinese president lands in US

Sage grouse decision follows push to preserve bird's habitat

Q&A: What is a sage grouse and why is the bird imperiled?

For 7 years, VW software thwarted pollution regulations

South Korea to probe Volkswagen diesel vehicle emissions

Bayer CropScience settles for $5.6M over deadly blast

Senate Democrats to unveil energy bill

Efficiency, renewables best route to power plan compliance: Forum

Oil and gas industry faces serious challenge, fracking historian says

Mexico hopes new rules will galvanize next lease auction

Oil prices slip over global economic uncertainty

LNG exports: Cheniere nails another French deal

Fallin got pressure from energy execs: Emails

Angry customers slam CPS over smart meter overcharging

Notre Dame to ditch coal

California cancer risk down with emissions

Upcoming Events

Clean tech a top priority as Chinese president lands in US

By Gene Johnson and Phuong Le

SEATTLE (AP) — Discussing how U.S. and Chinese experts and businesses can collaborate on nuclear energy, smarter electricity use and other clean technologies is a top agenda item as Chinese President Xi Jinping arrives in Seattle Tuesday, almost a year after he and President Barack Obama announced their nations would cooperate to fight climate change.

The three-day visit begins with talks between a handful of U.S. governors and six of their Chinese counterparts over issues that include improving energy efficiency in buildings, modernizing electrical grids and commercializing renewable energy, and the governors are expected to meet privately with Xi later in the day.

The University of Washington and Tsinghua University in Beijing are scheduled to sign an agreement saying they'll collaborate on research related to clean tech, and an energy company founded by Bill Gates, TerraPower Inc., will be entering an agreement with China National Nuclear Corp. to plan to work together on next-generation nuclear power plant technology.

"These are the largest economies in the world, and we're the biggest emitters of greenhouse gases, so improving cooperation and collaboration is really a necessity," said Brian Young, Washington state's director of economic development for the clean technology sector. "Second, it's a huge business opportunity. Both sides recognize the opportunity for job creation."

More

Sage grouse decision follows push to preserve bird's habitat

By Matthew Brown and Mead Gruver

BILLINGS, Mont. (AP) — Senior officials from the Obama administration will gather with Western governors in Colorado on Tuesday to announce whether a declining bird species that ranges across 11 states needs federal protections.

State and federal officials committed hundreds of millions of dollars in the past several years to preserve areas of sagebrush occupied by the greater sage grouse. That occurred even as energy companies and other industries placed more pressure on the ground-dwelling bird's population by developing near its breeding grounds.

A determination that the grouse does not need protection under the Endangered Species Act would reverse a 2010 finding that it was headed toward possible extinction.

That would avoid new restrictions on oil and gas drilling, grazing and other human activities in sage grouse habitat. Jurisdiction over the bird would remain with state wildlife agencies.

More

Q&A: What is a sage grouse and why is the bird imperiled?

By Mead Gruver

CHEYENNE, Wyo. (AP) — The Interior Department will announce new efforts Tuesday to conserve the greater sage grouse, a chicken-sized bird of the sagebrush that ranges from California to the Dakotas.

The implications for oil and gas drilling, renewable energy development and cattle grazing could be huge: The bird ranges across all or part of 11 states.

Here are some questions and answers about the sage grouse:

More

For 7 years, VW software thwarted pollution regulations

By Tom Krisher and Frank Jordans

DETROIT (AP) — Volkswagen became the world's top-selling carmaker trumpeting the environmental friendliness, fuel efficiency and high performance of diesel-powered vehicles that met America's tough Clean Air laws.

VW's success story was so good that pollution-control advocates did their own tests, hoping to persuade other countries to enforce the same strict standards.

Instead, they got a foul-smelling surprise: In actual driving, the VWs spewed as much as 40 times more pollution from tailpipes than allowed by the U.S. Environmental Protection Agency.

"We ran the program to show that U.S. diesels are clean," said John German, senior fellow with the International Council on Clean Transportation, the group that blew the whistle on Volkswagen. "Turned out we found a violator."

More

South Korea to probe Volkswagen diesel vehicle emissions

By Youkyung Lee

SEOUL, South Korea (AP) — South Korea said Tuesday it will investigate emission levels of Volkswagen diesel vehicles after the world's top-selling automaker admitted cheating U.S. tests.

Park Pan-kyu, a deputy director at South Korea's environment ministry, said that four models — Golf, Jetta, Beetle and Audi A3 — are subject to the probe, which is expected to end in November. About 6,000 vehicles made in 2014 and 2015 were sold under those nameplates in South Korea.

Volkswagen AG admitted that it rigged U.S. tests so it would appear that its diesel-powered cars were emitting fewer nitrogen oxides, which can contribute to ozone buildup and respiratory illness.

Park said Volkswagen could be fined up to 4 billion won ($3.4 million) and required to recall the vehicles if wrongdoing is found.

More

A message from America's Natural Gas Alliance

Clean is Powerful. Natural gas helps Georgia Power's plant generate electricity with 50% fewer emissions. Think about it.

Learn more at www.thinkaboutit.org.

Bayer CropScience settles for $5.6M over deadly blast

By Jonathan Matisse

CHARLESTON, W.Va. (AP) — The government has struck a $5.6 million settlement with Bayer CropScience over an explosion that killed two people at the company's Institute, West Virginia pesticide plant in 2008, federal officials announced Monday.

Under the agreement with the U.S. Environmental Protection Agency and the Department of Justice, Bayer CropScience will commit to spending $452,000 on safety improvements at chemical storage facilities in West Virginia, Texas, Missouri and Michigan.

The company will spend another $4.23 million to improve emergency preparedness and response in Institute and protect the Kanawha River. Bayer CropScience also will pay a $975,000 civil penalty.

Federal investigators found that safety lapses led to the deadly runaway chemical reaction that killed two workers in August 2008.

More

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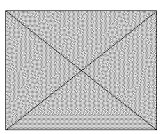


Week in Review – House Panel Moves To Lift Export Ban

Congress Gears up for Papal Visit.

Click here to read the brief

Senate Democrats to unveil energy bill

Senate Democrats – led by Minority Leader Harry Reid of Nevada – will unveil new energy legislation aimed at updating infrastructure and focusing on technical innovation to boost economic growth and cut waste and pollution, the Washington Examiner reports.

More

Efficiency, renewables best route to power plan compliance: Forum

Many of the speakers at a Monday night session to gather input on the best ways for Pennsylvania to comply with the Environmental Protection Agency's Clean Power Plan were favoring a push toward energy efficiency and renewable power sources, the Pittsburgh Tribune-Review reports.

More

Oil and gas industry faces serious challenge, fracking historian says

The price slump notwithstanding, the biggest threat to the oil and gas industry is the potential groundswell of support for the movement to ditch fossil fuels, fracking historian and energy editor Russell Gold has told an audience at Texas Christian University. But he added that renewables could co-exist with oil and gas, the Star-Telegram reports.

More

Mexico hopes new rules will galvanize next lease auction

Mexico has made changes to the bidding process for it second oil and gas lease auction since it opened up the country's energy market, hoping to attract more interest for the Sept. 30 event, the Houston Chronicle reports.

More

Oil prices slip over global economic uncertainty

Oil prices slipped Tuesday after a major rally the day before as investors worried about whether the global economy is strong enough to absorb historic stockpiles of crude. In London, Brent crude fell 72 cents a barrel to $48.20, while West Texas crude slipped $1.03 to $45.92 a barrel, Reuters reported.

More

LNG exports: Cheniere nails another French deal

Cheniere Energy says its new deal to send 89 trillion British thermal units of liquefied natural gas to Electricite de France SA from Sabine Pass in 2017-18 brings its total sales thus far to 340 trillion BTUs, Bloomberg reports.

More

Fallin got pressure from energy execs: Emails

Emails obtained by E&E show that Harold Hamm, Continental Resources CEO, and Alliance Resource Partners chief Joe Craft told Oklahoma Gov. Mary Fallin that she needed to pay more attention to oil and coal in her remarks to a state energy conference in 2013.

More

Angry customers slam CPS over smart meter overcharging

Some residents attending a meeting in San Antonio about CPS Energy billing accused the company of fraud, and others demanded the removal of smart meters from their property, KENS5 reports.

More

Notre Dame to ditch coal

Heeding the call from Pope Francis to act against climate change, Notre Dame University announced Monday it will stop burning coal to generate electricity, intending to more than halve its carbon footprint by 2030, USA Today reports.

More

California cancer risk down with emissions

Over the past 20 years the cancer risk from toxic air pollution in California has dropped 76 percent, according to data from the Air Resources Board, the Los Angeles Times reports.

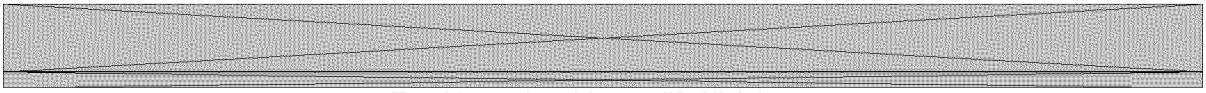
More

Upcoming Events

- Sep. 22, Washington: The French Ameri-Can Climate Talks to hold a forum on the forthcoming United Nations climate talks in December and the role the private sector will play. French Ambassador Gerard Araud and International Monetary Fund Managing Director Christine Lagarde among scheduled speakers. 3:00 pm , French Embassy, 4101 Reservoir Road NW, 20007.
- Sep. 22, Washington: Resources for the Future to hold a forum to examine the potential impact of carbon pricing, through taxes or credits, on low-income households and communities. 12:30 pm , 1616 P St. NW.
- Sep. 22, Commerce City, Colorado: Interior Secretary Sally Jewell to join federal officials and Govs., John Hickenlooper, Colo., Matt Mead, Wyo., Steve Bullock, Mont., and Brian Sandoval, Nev., to make an announcement regarding the greater sage-grouse. 12:00 pm , Rocky Mountain Arsenal National Wildlife Refuge Visitor Center 6550 Gateway Road Commerce City, CO 80022
- Sep. 22, Washington: ClearView Energy Partners Managing Director to speak at the American Gas Association's Natural Gas Roundtable. 12:00 pm , University Club, 1135 16th Street, NW.

Trouble seeing this email? Click here.

- Sep. 22, Washington: Senate Democrats led by Energy and Natural Resources Ranking Member Maria Cantwell, D-Wash., and Senate Minority Leader Harry Reid, D-Nev., to hold a press conference to unveil legislation to promote clean energy and reduce carbon emissions. 10:45 am , Mansfield Room (S-207)
- Sep. 22, Washington: The United States Energy Association to hold a forum on the state of the global liquefied natural gas exports and the role the U.S. can play. Christopher Goncalves, managing director and co-chair of BRG's Energy and Natural Resources Practice, to speak. 10:30 am , 1300 Pennsylvania Avenue, NW.



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To: Charmley, William[charmley.william@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 11:13:03 AM
Subject: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

http://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share

The company said that the software that let its diesel car engines defeat emissions tests was used worldwide, and that it had set aside about $7.3 billion to fix vehicles.

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: E&E Publishing
Sent: Tue 9/22/2015 11:13:05 AM
Subject: September 22 -- E&E Daily is ready

Read today's E&E Daily on the web

AN E&E PUBLISHING SERVICE

E&E DAILY — Tue., September 22, 2015

READ FULL EDITION

1.ENERGY POLICY:

Senate Democrats to unveil broad legislation

Senate Democrats today will introduce a comprehensive energy package with an emphasis on boosting clean technology.

ON THE HILL

2.VEHICLES:

House subcommittee to probe alleged VW emissions scam

3.FEDERAL AGENCIES:

Senate tweak would fix 'troubling decision' on IG access

4.REGULATIONS:

House to vote on fast-track review bill

5.REGULATIONS:

Subcommittee zeros in on agencies' use of regulatory guidance

POLITICS

6.FEDERAL WORKFORCE:

Unions 'thrilled' as Walker campaign fizzles

7.CAMPAIGN 2016:

Ad blitz to target 9 GOP senators over shutdown possibility

UPCOMING HEARINGS AND MARKUPS

8.CALENDAR:

Activity for September 21 - September 27, 2015

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Environment & Energy Daily (E&E Daily) is written and produced by the staff of E&E Publishing, LLC. Designed for policy players who need to know what's happening to their issues on Capitol Hill, from federal agency appropriations to comprehensive energy legislation, E&E Daily is the place insiders go to track their environmental and energy issues in Congress. E&E Daily publishes daily by 7:30 a.m. while Congress is in session.

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: E&E Publishing
Sent: Tue 9/22/2015 11:14:51 AM
Subject: September 22 -- E&E Daily is ready

Read today's E&E Daily on the web

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E&E DAILY — Tue., September 22, 2015

READ FULL EDITION

1.ENERGY POLICY:

Senate Democrats to unveil broad legislation

Senate Democrats today will introduce a comprehensive energy package with an emphasis on boosting clean technology.

ON THE HILL

2.VEHICLES:

House subcommittee to probe alleged VW emissions scam

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Environment & Energy Daily (E&E Daily) is written and produced by the staff of E&E Publishing, LLC. Designed for policy players who need to know what's happening to their issues on Capitol Hill, from federal agency appropriations to comprehensive energy legislation, E&E Daily is the place insiders go to track their environmental and energy issues in Congress. E&E Daily publishes daily by 7:30 a.m. while Congress is in session.

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To: Pat Quinn[pquinn@theaccordgroup.com]
From: Grundler, Christopher
Sent: Tue 9/22/2015 11:17:19 AM
Subject: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

http://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share

The company said that the software that let its diesel car engines defeat emissions tests was used worldwide, and that it had set aside about $7.3 billion to fix vehicles.

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 11:20:56 AM
Subject: FW: Proud of the EPA

A nice note of thanks that I thought should be passed on to the larger group as you all see fit.

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: **Ex. 6**
Sent: Tuesday, September 22, 2015 12:36 AM
To: Kaul, Meetu
Subject: Proud of the EPA

Mr. Meetu,

I am a Chemical Engineer employed as an air quality specialist for a Minnesota-based environmental consulting firm, and would like to start this email off by saying thank you to yourself and everyone on your staff for your hard work to uncover the Volkswagen emission deception. It is thanks to people like you that progress can be made towards attainment with NAAQS from coast-to-coast. This level of willful, malignant deception must be punished to the fullest extent allowable under the CAA.

Please continue to do everything possible to prevent this outrage from ever being financially beneficial to any automaker in the future. The American People are relying on your action on this matter, and I would very much so like to thank you for your actions.

Regards,

Ex. 6

To: Ex. 6
From: Kaul, Meetu
Sent: Tue 9/22/2015 11:27:13 AM
Subject: RE: Proud of the EPA

Thank you very much. Your words are very appreciated. Our investigation is continuing and I can assure you we know very well who it is we are working for – the American public.

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Ex. 6
Sent: Tuesday, September 22, 2015 12:36 AM
To: Kaul, Meetu
Subject: Proud of the EPA

Mr. Meetu,

I am a Chemical Engineer employed as an air quality specialist for Ex. 6 environmental consulting firm, and would like to start this email off by saying thank you to yourself and everyone on your staff for your hard work to uncover the Volkswagen emission deception. It is thanks to people like you that progress can be made towards attainment with NAAQS from coast-to-coast. This level of willful, malignant deception must be punished to the fullest extent allowable under the CAA.

Please continue to do everything possible to prevent this outrage from ever being financially

beneficial to any automaker in the future. The American People are relying on your action on this matter, and I would very much so like to thank you for your actions.

Regards,

Ex. 6

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Bunker, Byron
Sent: Tue 9/22/2015 11:29:36 AM
Subject: RE: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

Incomprehensible.

****
Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623
****

-----Original Message-----
From: Grundler, Christopher
Sent: Tuesday, September 22, 2015 7:12 AM
To: Bunker, Byron; Birgfeld, Erin; Cook, Leila; Conger, Nick; Millett, John; Wehrly, Linc; Simon, Karl; Blubaugh, Jim
Subject: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

http://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share

The company said that the software that let its diesel car engines defeat emissions tests was used worldwide, and that it had set aside about $7.3 billion to fix vehicles.

Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 11:30:11 AM
Subject: Has OAR fixed the incorrect info re: the Passat models? FW: VW Notice of Violations - 2012 & 2013 Passat

Or have we figured out how to answer that question?

Evan forwarding to you (and have others to forward as well like yesterday).

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Ex. 6
Sent: Monday, September 21, 2015 9:56 PM
To: Kaul, Meetu
Subject: VW Notice of Violations - 2012 & 2013 Passat

Hi Ms. Kaul,

Regarding the VW Notice of Violations, there is inconsistent reporting by the EPA regarding impacted Passat model years. This is currently being picked up by the greater press.

Here the EPA states the Passat MY 2012 and 2013 are not affected:

http://yosemite.epa.gov/opa/admpress.nsf/6424ac1caa800aab85257359003f5337/dfc8e33b5ab162b985257ec40057813b!OpenDocument

Here the EPA states the Passat MY 2012 and 2013 are affected within the NOV:

http://www3.epa.gov/otaq/cert/documents/vw-nov-caa-09-18-15.pdf

Any effort to have your staff provide clarification would be appreciated as I am unsure if my own 2012 Passat is impacted.

Thank you for your time and consideration.

Ex. 6

To: Senn, John[Senn.John@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 11:32:53 AM
Subject: FW: Volkswagen discrepancy

Ex. 5, 7

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Yerak, Becky [mailto:byerak@chicagotribune.com]
Sent: Monday, September 21, 2015 5:40 PM
To: Kaul, Meetu
Cc: Karp, Gregory P.
Subject: Volkswagen discrepancy

Hi Kaul:

The EPA news release and letter of violation don't match on which VW models are affected.

Am I reading the letter wrong?

News release:

http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/dfc8e33b5ab162b985257ec400

Notice of violation:

http://www3.epa.gov/otaq/cert/documents/vw-nov-caa-09-18-15.pdf

For example, the chart in the letter does not list 2009 Beetle, Audi A3 or Golf, as the news release does.

However, the letter lists the 2012 Passat, but the news release does not.

Can you explain the discrepancies?

Becky Yerak

Note: new work email address as of 8/29/14: byerak@**chicago**tribune.com

becky.yerak@gmail.com

Business reporter

Chicago Tribune

435 N. Michigan Ave.

Chicago, IL 60611

Live: Work phone: 1-312-222-**4283** Cell**:** 1-312-823-7514 **Home phone** **Ex. 6**

Slightly disembodied:

LinkedIn Twitter Google Plus Facebook Page Pinterest

Blog: ChiFinance

Leo

My daily horoscope:

via Yahoo! Shine

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 11:33:22 AM
Subject: FW: Now what

Forwarding for a response

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: **Ex. 6**
Sent: Monday, September 21, 2015 5:40 PM
To: Kaul, Meetu
Subject: Fwd: Now what

My 2012 VW Jetta is scheduled to be renewed by October 2015
If it does not legitimately pass the smog test, what recourse do I have since it is my only

vehicle?

Thank you.

Ann

Ex. 6

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 11:34:09 AM
Subject: FW: VW Diesel

Forwarding to you for response

Ms.Meetu Kaul, Attorney-Advisor
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Ex. 6
Sent: Monday, September 21, 2015 5:10 PM
To: Kaul, Meetu
Subject: VW Diesel

Thank you for bringing this problem to light.

I've got two new VW TDIs that I bought because they were "clean" vehicles. One 2 years old, one a few months old. My lung health has clearly deteriorated since I've been driving the 2013 TDI. I've got doctor's records to substantiate that. I thought it was a coincidence, but maybe not.

If I can be of help to you, let me know. I'd be happy to.

If I want to return the cars to VW and be made whole, both in terms of money spent for the cars and my health issues (assuming that link can be convincingly shown), will your agency protect my rights, or should I "sue" VW, or what?

Thanks again.

Ex. 6

To: Belser, Evan[Belser.Evan@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 11:38:49 AM
Subject: Episodic flexiplace today

Hi Evan,

This is a reminder that I put in for episodic flexiplace for today through Thursday. I'm online (as

Ex. 5, 7

Due to the volume of VW calls, I'm trying to figure out the best way to handle my phones (forwarding versus leaving a message with an alternative number).

But you can reach me a **Ex. 6**

I'm also going to **Ex. 6** will let you know/put in leave for that as soon as its confirmed.

Thanks,

Meetu

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]
Cc: Kelley, Rosemarie[Kelley.Rosemarie@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 11:46:35 AM
Subject: RE: News report: VW sets aside $7 billion

From the VW AG website - their statement:

Wolfsburg, 2015-09-22

Volkswagen AG has issued the following information:

Volkswagen is working at full speed to clarify irregularities concerning a particular software used in diesel engines. New vehicles from the Volkswagen Group with EU 6 diesel engines currently available in the European Union comply with legal requirements and environmental standards. The software in question does not affect handling, consumption or emissions. This gives clarity to customers and dealers.

Further internal investigations conducted to date have established that the relevant engine management software is also installed in other Volkswagen Group vehicles with diesel engines. For the majority of these engines the software does not have any effect.

Discrepancies relate to vehicles with Type EA 189 engines, involving some eleven million vehicles worldwide. A noticeable deviation between bench test results and actual road use was established solely for this type of engine. Volkswagen is working intensely to eliminate these deviations through technical measures. The company is therefore in contact with the relevant authorities and the German Federal Motor Transport Authority (KBA Kraftfahrtbundesamt).

To cover the necessary service measures and other efforts to win back the trust of our customers, Volkswagen plans to set aside a provision of some 6.5 billion EUR recognized in the profit and loss statement in the third quarter of the current fiscal year. Due to the ongoing investigations the amounts estimated may be subject to revaluation. Earnings targets for the Group for 2015 will be adjusted accordingly.

Volkswagen does not tolerate any kind of violation of laws whatsoever. It is and remains the top priority of the Board of Management to win back lost trust and to avert damage to our customers. The Group will inform the public on the further progress of the investigations constantly and transparently.

Ms.Meetu Kaul, Attorney-Advisor
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----

From: Werner, Jacqueline
Sent: Tuesday, September 22, 2015 7:28 AM
To: Kaul, Meetu; Orehowsky, Gregory; Belser, Evan
Cc: Kelley, Rosemarie; Shinkman, Susan; Brooks, Phillip
Subject: News report: VW sets aside $7 billion

To address emissions scandal as the investigation allegedly spreads to Europe and Asia. Also according to Good Morning America- 11 million cars were equipped with suspect emissions software.

Sent from my iPhone

Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Brooks, Phillip
Sent: Tue 9/22/2015 11:46:39 AM
Subject: Automatic reply: News report: VW sets aside $7 billion

I am out of the office and unable to check email until Friday, October 2. If you have an urgent matter, please contact Apple Chapman at (202) 564-5666 or chapman.apple@epa.gov

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 11:48:38 AM
Subject: This VW Diesel Scandal Is Much Worse Than a Recall
MAIL_CONVERSATION_TOPIC: This VW Diesel Scandal Is Much Worse Than a Recall
Created: Fri 3/18/2016 6:18:22 PM

This isn't cost-cutting. This is outright cynical deceit.

View article...

To: Grundler, Christopher[grundler.christopher@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Millett, John[Millett.John@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]
From: Blubaugh, Jim
Sent: Tue 9/22/2015 11:58:00 AM
Subject: RE: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

It appears this case is getting a great deal of coverage both within Germany as well as across Europe. EPA is receiving inquiries regarding next steps from several European Embassies here in DC as well as the State Department. [redacted] Ex. 5, 7

Jim

Jim Blubaugh, Director
International Programs
Office of Transportation and Air Quality
U.S. Environmental Protection Agency
(202) 564-5403

-----Original Message-----
From: Grundler, Christopher
Sent: Tuesday, September 22, 2015 7:12 AM
To: Bunker, Byron; Birgfeld, Erin; Cook, Leila; Conger, Nick; Millett, John; Wehrly, Linc; Simon, Karl; Blubaugh, Jim
Subject: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

http://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share

The company said that the software that let its diesel car engines defeat emissions tests was used worldwide, and that it had set aside about $7.3 billion to fix vehicles.

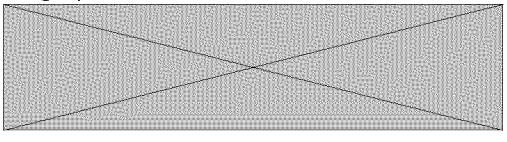
Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: The Washington Post
Sent: Tue 9/22/2015 11:58:52 AM
Subject: The Daily 202: What went wrong for Scott Walker

View The Daily 202 on the Web

Share on Twitter Share on Facebook

Scott Walker drops out of the race at a news conference in Madison last night. (Photo by Andy Manis/Getty Images)



THE BIG IDEA:

— Scott Walker believed that surviving the recall prepared him for the rigors and scrutiny that come with running for president. He was wrong.

Winning three elections in four years in a blue state like Wisconsin clouded his judgment and made him overconfident in his own abilities.

He shuffled off to his super PAC some of his closest, long-term advisers who helped him get onto the national stage. From there, they could not coordinate with him. He surrounded himself with an oversized entourage that didn't seem to understand what made him tick. He wound up looking like a flip-flopper who was not ready for primetime and who was constantly telling audiences what they wanted to hear.

Walker seemed to blame Donald Trump last night for changing the dynamic in the race and causing him to drop out, but he and his own senior staff deserve more blame than anyone else. Here are five of the reasons Walker blew his very real chance to be the GOP nominee—

1) He came across as inauthentic. Trump is leading in the polls because conservatives think he tells it like it is, even if they don't agree with him on every issue or find some of what he says offensive. Walker, who has never held a real job outside of politics, made himself look like

a career politician with constant punts and recalibrations. It always felt like he had his finger in the wind and was studying the polls a little too closely. The Post reporter on the Walker beat, Jenna Johnson, seemed to always be filing stories on how the governor was trying to clarify his position on this or that.

He flip-flopped on ethanol to try winning over Iowa agriculture interests.

He flipped on immigration, taking a hardline to match the mood of the moment and to have an issue with which he could contrast himself from the right with Jeb Bush and Marco Rubio.

He seemed to endorse ending birthright citizenship last month. Then he said he didn't have a position on the issue. Then he said that he did not want to change the Constitution, which many believe guarantees citizenship to those born on U.S. soil.

Over Labor Day weekend, he refused to say if the U.S. should accept more Syrian refugees, telling reporters that it was a "hypothetical question" and that he wanted to talk about reality – only to say soon after that the U.S. should *not* accept more refugees.

2) He was out of his depth on both foreign and domestic policy.

At the Club for Growth donor meeting this spring, he appeared not to understand what was actually in Dodd-Frank financial regulatory reform or the ins-and-outs of the Export-Import bank, two issues big in Washington but not Wisconsin.

He claimed that Ronald Reagan firing the air traffic controllers was "the most significant foreign policy decision of my lifetime." Even supporters couldn't believe when he likened taking on ISIS to taking on Big Labor. "If I can take on 100,000 protesters, I can do the same across the world," he said at CPAC in February.

3) He seemed unserious and thus unpresidential.

On "Meet the Press" last month, when Chuck Todd asked Scott Walker about building a wall along the northern border with Canada, Walker responded: "That's a legitimate issue for us to look at." Then a few days later, he said he never supported the idea and blamed the media for

twisting his words.

His team thought they were being really clever when they had him announce he'd cancel the Chinese state dinner if he was president. They went out on a limb, assuming others would follow. Instead, he got mocked by conservative thought leaders, who said he looked naïve.

4) He never picked a lane.

It was not clear if Walker was trying to be the evangelical candidate, the tea party candidate, the establishment alternative to Bush or something else. Trying to be all things to all people made him seem indecisive. He didn't take a position on evolution, afraid of alienating social conservatives. He said early in the year that he didn't know if Obama was a Christian. Several months later, asked the same question, he said he still did not know.

5) He staffed up way too much way too fast.

A recent count put the number of full-time Walker campaign staff at around 90, including a full-time photographer. He spent the spring rolling out the names of consultants he hired in the early states before he had demonstrated that he could put together a finance operation to pay their salaries.

Walker wrongly assumed that donors who had given to him during the recall fight would naturally support his presidential campaign. He was out of practice at running against other Republicans.

— The highest highs and lowest lows: Walker led in early Iowa polls after a breakout performance in January. But he got less speaking time than every other candidate on stage at last week's debate. In February, the Wisconsin governor actually had the largest share of the GOP presidential chatter across all forms of media. More than one in four mentions of any Republican contender on Twitter, television or online media that month was about Walker. But that number fell sharply as the field grew, and Walker was left behind, as this graphic from our analytics partners at Zignal Labs illustrates:

— Who benefits the most from Walker dropping out? Establishment types turned to Walker because they didn't like Jeb. Will they settle for the former Florida governor now? Or will they look to someone else?

- **John Kasich** is now the only Midwestern governor still running. He's doing well in New Hampshire and can make a compelling case that he'll be competitive in the region during a general election; he's the only incumbent governor running who is actually popular in the state he leads.
- **Carly Fiorina** is getting her moment right as a bunch of talent and donors come on the market. The Des Moines Register speculates that she will gain the most.
- **Marco Rubio:** The Florida senator competed with Walker for much of the year to be the bridge candidate between the tea party and establishment wings of the party. Rubio has kept his head down, hoping to peak late, a strategy validated by Walker's rapid rise and fall.

— The scramble is on for his donors. "Aides to Jeb started approaching top Walker bundlers after Walker failed to break out in last week's GOP debate, urging them to jump ship," Matea Gold and Sean Sullivan report. "Deep-pocketed contributors helped Unintimidated PAC raise $20 million in less than two months this spring. The super PAC was on track to raise an additional $15 million to $20 million by the end of the year, according to a Republican with intimate knowledge of the operation … Among donors, there is no clear consensus about who to go with now. Among the favorites mentioned in phone conversations are Rubio, Fiorina, John Kasich and Chris Christie. Bush is seen as having less appeal, in part because many of Walker's backers view him as insufficiently conservative."

Welcome to The Daily 202,
PowerPost's morning newsletter.
Sign up to receive the newsletter.
With contributions by Elise Viebeck.

—

WHILE YOU WERE SLEEPING:

— Hillary Clinton wants a monthly cap of $250 on the amount seriously and chronically ill patients pay out-of-pocket for prescription drugs. It's part of her plan to expand on Obamacare and she'll elaborate today in Iowa. The announcement comes on the heels of outrage over the overnight rise of the price in an anti-parasitic drug from $13.50 to $750 per tablet. A similar hike for the price of tuberculosis drugs was rescinded after a public outcry.

— Bernie Sanders, Carly Fiorina and Ted Cruz all made the late-show talk circuit last night.

(@tedcruz)

— Stephen Colbert grilled Cruz about gay marriage. The Texas senator was booed at one point when discussing his opposition to gay rights, with Colbert responding: "Guys, however you feel, he's my guest so please don't boo him." Read story here. Watch full episode on CBS here.

(@carlyfiorina)

— Fiorina defended her business record at HP on Jimmy Fallon and said she would be "fine" with a Muslim as president. "I think that's wrong," Fiorina said in response to Ben Carson's controversial comment. "It says in our Constitution that religion cannot be a test for office. I believe that anyone of any faith make better leaders." She also said that Vladmir Putin, who she reiterated she would ice out, and Trump "have a lot in common." Read story here. Watch clips from NBC here.

— Bernie on Wilmore made a play for African-Americans: On Comedy Central's "Nightly Show," Sanders continued his effort to reach black voters by donning a "Black-Eyed Peas matter" cap and eating "soul-food" with host Larry Wilmore, who asked how the senator would get black people to "feel the Bern." "We're going to do everything we can to end institutional racism in this country," Sanders proclaimed. Read story here. Watch clips from Comedy Central here.

GET SMART FAST:

1. More than **one in five female undergraduates** at top universities said this year that they were victims of rape or other forms of assault and misconduct in a new study. Learn more.
2. Former peanut executive Stewart Parnell was sentenced Monday to 28 years in prison for his role in a nationwide **salmonella** outbreak that killed nine people and sickened hundreds in 2008 and 2009. "The sentence marked the most severe punishment ever for a food-related crime," Brady Dennis reports.
3. The **Justice Department** has launched a criminal investigation into whether **Volkswagen** cheated on emissions standards.
4. The director of the **Secret Service** apologized after 700 parents and children were ordered out of Lafayette Square Saturday night for at least two hours. The move disrupted their plans for a candlelight vigil to raise awareness and research funding for childhood cancer. (Dana Hedgpeth and Fredrick Kunkle)
5. **Senate Republicans** are preparing to introduce a short-term spending bill to avert a government shutdown at the end of the month, possibly today. (Kelsey Snell)
6. **Senate Democrats** will unveil an ambitious climate change bill to coincide with the pope's arrival. It has no chance of passing this Congress. (NYT)
7. The family of a 14-year-old **Muslim student** who got in trouble over a homemade clock mistaken for a possible bomb withdrew the boy Monday from his suburban Dallas high school. (AP)
8. The Wall Street Journal reports that the **Federal Reserve's** decision to hold interest rates steady was a very "close call," with members of the committee divided. Meanwhile, "U.S. **home resales** fell more than expected in August, a cautionary sign for the U.S. housing market which has recently looked on stronger footing," per Reuters.
9. A U.S. grand jury is examining allegations of corruption involving the embattled prime minister of **Malaysia** and people close to him. (NYT)
10. A federal jury convicted a man of murder for pushing his wife to her death off a cliff as they hiked in Colorado's **Rocky Mountain National Park** to celebrate their wedding anniversary, rejecting his claim that her fall was a tragic accident, the AP reports.

POWER PLAYERS IN THE NEWS:

1. **Brian Williams** returns to TV tonight, anchoring MSNBC's

coverage of **Pope Francis'** arrival in the United States. (Paul Farhi)

2. **Taran Killam** has landed the role of **Donald Trump** on "Saturday Night Live." (Deadline Hollywood)
3. The Pennsylvania Supreme Court suspended the law license of state Attorney General **Kathleen Kane**, limiting the actions she can perform as she continues in office despite criminal charges. (Pittsburgh Post-Gazette)
4. The **ACLU** filed a motion in court saying Kentucky clerk **Kim Davis** is violating the terms of her release from jail, interfering with deputies issuing marriage licenses. (NBC)
5. **Paul Ryan** plans to moderate a South Carolina forum focused on poverty on Jan. 9 for the presidential candidates.
6. Rep. **Trey Gowdy** (R-S.C.), chairman of the Benghazi committee, is the featured guest at a fundraiser for **Marco Rubio** in Dallas. The two are friends, and sources say this does not constitute an endorsement.
7. South Carolina Rep. **Mick Mulvaney** endorsed Rand Paul. A constant thorn in John Boehner's side, "his endorsement gives Paul a much-needed boost in perhaps the least habitable early primary state." (David Weigel)

(@RandPaul)

WAPO HIGHLIGHTS:

Chris Christie and Brig. Gen. Michael Cunniff ride in a vehicle as they review troops during the New Jersey National Guard's annual Military Review in Sea Girt, N.J. (AP Photo/Mel Evans)

MUST-READ — "Inside Chris Christie's militia, flab and cronyism trigger mutiny in the ranks," by Craig Whitlock: "As commander in chief of the New Jersey National Guard, Christie is in charge of 8,400 citizen soldiers, a militia that has become increasingly dysfunctional under his watch … Christie reappointed a two-star Army general — a childhood friend — to lead the Guard. But the married general was forced to resign in disgrace after staff members caught him having an affair at work, documents show. The governor's next pick, an Air Force pilot, was secretly reprimanded by the Pentagon last year for his excessive waistline and for repeatedly ducking physical-fitness tests, according to records obtained by The Washington Post under the Freedom of Information Act. More recently, several high-ranking officers have filed whistle-blower complaints, alleging that the Guard's

leadership is plagued by cronyism, racism and a 'toxic' command climate … 'It's like the mob,' said Brian K. Scully, a retired Army lieutenant colonel who says he lost his job because he refused to help cover up the general's affair. 'One minute you're the made man. The next, you get a bullet in the back of your head. Only here it's career assassination.'"

— "No soft landing as Chinese President Xi begins state visit," by Todd C. Frankel from Seattle, the first stop on Xi's U.S. visit: "Suspicion now hangs over even ordinary events, such as a Chinese-American Internet summit set to occur during Xi's visit to Seattle, with accusations that Chinese officials strong-armed U.S. tech titans into attending. A minor meet-and-greet in Seattle between Xi and U.S. elected officials provided a fresh opportunity to offend after the four Republican members of Washington state's congressional delegation bowed out of the informal gathering." David Nakamura and Juliet Eilperin note the unusual convergence of this week's visits from President Xi and Pope Francis.

— "Jeff Smith was supposed to be an ex-con with a story to tell. Instead, he's an ex-con with a story to tell," by Ben Terris: "On a recent September evening, Jeff Smith, a former political rising star from St. Louis with an anchorman's head of hair and a Hill intern's blue blazer, sat before an audience at Dupont Circle's Kramerbooks to talk about his year in prison…Just a decade ago, Smith had one of the brightest futures of any Democratic politician in Missouri. He was a progressive state senator with a budding national profile, whose narrow defeat in an election for Congress was chronicled in a well-received 2006 documentary, 'Can Mr. Smith Get to Washington Anymore?'…How Smith ended up serving time is one of the wildest and most convoluted sagas in recent political history."

—"With fight against Islamic State in Iraq stalled, U.S. looks to Syria for gains," by Missy Ryan and Greg Jaffe: "With the offensive to reclaim territory from the Islamic State largely stalled in Iraq, the Obama administration is laying plans for a more aggressive military campaign in Syria, where U.S.-backed Kurdish forces have made surprising gains in recent months…The White House's top national security officials met last week and will convene again in the next few days to discuss ways to capi-tal-ize on recent and unexpected gains made by Syrian irregular forces. The administration is considering

providing arms and ammunition to a wider array of rebel groups in Syria and relaxing vetting standards, effectively deepening America's involvement in the ongoing civil war." Russia, meanwhile, continues to expand the number of combat aircraft in country.

— The Catholic lobby is gaining in influence, even though its political wins are limited, explains PowerPost's Catherine Ho.

SOCIAL MEDIA SPEED READ:

–Pictures of the day:

With the pope countdown entering its final hours, Washington is getting excited. Rep Todd Rokita (R-Ind.) tweeted photos of his invitation to the pontiff's speech at the Capitol:

(@ToddRokita)

D.C. neighborhood blog PoPville shared this photo of Kitkit of Brightwood, who is "super stoked" about Francis's visit:

(@PoPville)

And Meghan Roh, an aide to Sen. Tammy Baldwin (D-Wis.), shared this photo of preparations near Capitol Hill. "@Pontifex Potties™ all set at Union Station," she tweeted:

(@megroh)

Jeb spoke in Mason City, Iowa, the town that inspired "The Music Man," where he criticized Hillary's "machine" for 9/11-related attacks:

(@betsy_klein)

"The wifi password for Jeb's event at Music Man Square is on point," said Betsy Klein, a CNN embed in Iowa:

(@betsy_klein)

–Tweets of the day:

Hillary Clinton aide Huma Abedin joined Twitter with the handle @HumaAbedin:

(@HumaAbedin)

Clinton press aide Nick Merrill followed up with a video of the moment (watch here):

(@NickMerrill)

(@NickMerrill)

Donald Trump made a comment about Twitter during a visit to the company's New York headquarters:

(@AlexLuxenberg)

Is the feud ongoing? In the evening, Trump expressed dismay at the coverage of his campaign on Fox News:

(@realDonaldTrump)

(@realDonaldTrump)

–Instagrams of the day:

Lena Dunham debuted a Ruth Bader Ginsburg pin on Instagram. "RBG watchin over me," she wrote:

(lenadunham)

On the campaign trail, Hillary Clinton got caught in a double selfie:

(hillaryclinton)

For his last Instagram post of the campaign, Scott Walker celebrated "National Wife Appreciation Day":

(scottwalker)

—

GOOD READS FROM ELSEWHERE:

House Minority Leader Nancy Pelosi says she's lived her whole life with the conflict between her Catholic faith and her support for abortion rights. (AP Photo/Susan Walsh, File)

— New York Times, "In Pelosi, strong Catholic faith and abortion rights coexist," by Jennifer Steinhauer: "For Representative Nancy Pelosi…the issue of abortion rights has always been ancillary to her unwavering faith and deep approbation for generations of popes. 'I actually agree with the pope on more issues than many Catholics who agree with him on one issue,' Ms. Pelosi said in an interview…But that one issue, abortion, is adding a thick layer of tension to the otherwise convivial mood as Congress prepares for the arrival of Pope Francis this week… 'If they [Republicans] think they are making the pope more welcome' by putting abortion measures on the legislative calendar the week he is in Washington, 'they are mistaken,' [Pelosi] said. 'The pope is his own reason' … For Ms. Pelosi, the notion of disagreeing with other Catholics about abortion has not weighed on her sense of faith. 'I think everyone grants everyone their position,' she said. 'The church has their position, and we have ours, which is that a woman has free will given to her by God. My family is very pro-life,' she added, noting that she has lived with the conflict all her life."

— Roll Call, "Members will be blocked 2 ways from touching Pope Francis," by David Hawkings: "Too many members cannot be trusted to behave themselves when Pope Francis comes to the Capitol, the congressional leadership has decided. And so, to enforce decorous discipline, some extraordinary measures are being readied. Each party is assembling teams of lawmakers to essentially act as blocking tackles, willing to restrain any of their colleagues intent on trying to reach out for a papal touch as he walks onto the floor of the House. And after the historic speech, the doors to the cloakrooms and the hallways will be blocked — and in some cases, locked — to prevent lawmakers from leaving the chamber for perhaps half an hour, until Francis has appeared on a West Front balcony to greet the ticketed throng and then departed the Hill by motorcade… leadership is looking for about 50

members known for their patience and institutional good manners. On the promise they'll keep their hands to themselves, they'll be assigned to wear dark colors (with hems below the knee for women) as papal protocol dictates, show up when the doors open and fill the three chairs on either side of the aisle in each of the chamber's eight rows of fixed seating."

— Vox.com's Matthew Yglesias, not exactly a GOP primary voter, makes the argument that Rubio is a better bet for the GOP than Jeb: "One key reason is that while I, personally, am of the school of thought that outsider candidates like Trump and Carson face much longer odds than their current standing in the polls implies there are no sure things in politics. It's at least *conceivable* that one of those guys — or Ted Cruz — really could sweep the field. George McGovern and Jimmy Carter, for example, both won Democratic Party nominations over the objections of party insiders…All the conventional candidates in the field… have something of an obligation to ensure that they don't collectively do so much to divide the establishment that they let an outsider in. Call it low-energy or blame the lack of support from his mother, but from day one every aspect of Bush's campaign not directly related to fundraising has been unimpressive…Marco Rubio, by contrast, is a dynamic public speaker and gutsy political risk-taker…And, crucially, Rubio has the *exact same policy positions* as Bush."

— Wall Street Journal, "Facebook restrictions on user data cast a long shadow," by Deepa Seetharaman and Elizabeth Dwoskin: "Dozens of startups that had been using Facebook data have shut down, been acquired or overhauled their businesses. Political consultants are racing to find new ways to tap voters' social connections ahead of the 2016 presidential election….The new rules reflect Facebook's shifting attitude toward third parties using its data, considered one of the world's richest sources of information on human relationships…Without a window into friend networks, apps and other businesses lose a key channel for growth, while users may find their networks less useful for landing a job or a date."

HOT ON THE LEFT

Cruz blames Obama for the way Carson talked about Muslims. From Talking Points

HOT ON THE RIGHT

Half in U.S. say government is an immediate threat. From Gallup: "Almost half of

Memo: "On Fox News, Cruz defended Carson … 'The broader question, and what I think Ben was trying to get at, is: what are the consequences in the last six and a half years of the Obama presidency?'"

Americans, 49%, say the federal government poses 'an immediate threat to the rights and freedoms of ordinary citizens,' similar to what was found in previous surveys conducted over the last five years. When this question was first asked in 2003, less than a third of Americans held this attitude … The remarkable finding about these attitudes is how much they reflect apparent antipathy toward the party controlling the White House, rather than being a purely fundamental or fixed philosophical attitude about government."

DAYBOOK:

— Yom Kippur begins at sunset.

— What's happening today on the campaign trail: Donald Trump appears on "The Late Show" with Stephen Colbert. In Iowa, Hillary meets with the Des Moines Register editorial board and attends a community forum in Des Moines while Jeb makes stops in Cedar Falls, Gladbrook and Cedar Rapids. In S.C., Carly Fiorina attends a national security forum at the Citadel in Charleston and a town hall in Myrtle Beach, while Mike Huckabee makes stops in Myrtle Beach, Columbia, Whitmire and Newberry. Ben Carson holds rallies in Sharonville and Cedarville, Ohio, while Lindsey Graham meets voters in Manchester, N.H. Rick Santorum also campaigns in Des Moines and Ames, Iowa, on Tuesday.

–On the Hill: The Senate reconvenes at 10 a.m. to resume consideration of the motion to proceed to H.R. 36, the 20-week abortion ban. At 11 a.m., the chamber votes on the motion to invoke cloture on the motion to proceed to the bill. Later, senators are expected to vote a second time on a similar measure for H.R. 2685, the defense

appropriations bill. The House meets in pro forma session at 4 p.m.

–At the White House: President Obama, Vice President Biden and their wives greet Pope Francis upon his arrival at Andrew Air Force Base at 4 p.m. Earlier in the day, Biden speaks at the White House Initiative on Historically Black Colleges and Universities' National HBCU Week annual conference at the Washington Marriott.

QUOTE OF THE DAY:

"I look forward to Governor Walker supporting my campaign when I am the Republican nominee," Donald Trump said following Walker's exit from the race, per Breitbart News.

NEWS YOU CAN USE IF YOU LIVE IN D.C.:

— **"Monday's gloom will resume this morning with a cloudy canopy and scattered light showers or drizzle**…The situation slowly starts to clear this afternoon into tonight before we launch into some very nice and warm days tomorrow into Thursday morning," forecasts Capital Weather Gang.

— **The Pope arrives during the evening rush hour.** Here's a guide to road closures and Metro schedules. The bottom line: walk if you can. Here's a handy rundown of the best places to see Francis while he's in Washington.

— **The Nationals-Orioles game got rained out and postponed until Thursday at 4 p.m.**

— **Metro has reached a deal with four mobile carriers to have full cell service across the system by the end of the decade.**

VIDEOS OF THE DAY:

By far, this is the best recap out there. Watch key moments of the second Republican debate, as reenacted by kids (using verbatim quotes) here. Definitely worth the click:

(Funny or Die)

John Kasich grooved to "Shut Up and Dance" during a campaign rally in

Michigan (the humanizing video was posted by the liberal group following him with a tracker):

(American Bridge 21st Century)

Donald Trump participated in a live Twitter chat (#asktrump) at the company's headquarters in New York. Asked about the key to success in business, he said it is all about never quitting: "Never, ever give up."

(@realDonaldTrump)

Lady Gaga has released a powerful video to shine light on the campus rape epidemic. Watch here.

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 12:00:28 PM
Subject: Greg - what are th Ex. 5, 7

Ex. 5, 7

Ms.Meetu Kaul, Attorney-Advisor
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Kaul, Meetu
Sent: Tuesday, September 22, 2015 7:47 AM
To: Werner, Jacqueline; Orehowsky, Gregory; Belser, Evan
Cc: Kelley, Rosemarie; Shinkman, Susan; Brooks, Phillip
Subject: RE: News report: VW sets aside $7 billion

From the VW AG website - their statement:

Wolfsburg, 2015-09-22

Volkswagen AG has issued the following information:

Volkswagen is working at full speed to clarify irregularities concerning a particular software used in diesel engines. New vehicles from the Volkswagen Group with EU 6 diesel engines currently available in the European Union comply with legal requirements and environmental standards. The software in question does not affect handling, consumption or emissions. This gives clarity to customers and dealers.

Further internal investigations conducted to date have established that the relevant engine management software is also installed in other Volkswagen Group vehicles with diesel engines. For the majority of these engines the software does not have any effect.

Discrepancies relate to vehicles with Type EA 189 engines, involving some eleven million vehicles worldwide. A noticeable deviation between bench test results and actual road use was established solely for this type of engine. Volkswagen is working intensely to eliminate these deviations through technical measures. The company is therefore in contact with the relevant authorities and the German Federal Motor Transport Authority (KBA Kraftfahrtbundesamt).

To cover the necessary service measures and other efforts to win back the trust of our customers, Volkswagen plans to set aside a provision of some 6.5 billion EUR recognized in the profit and loss statement in the third quarter of the current fiscal year. Due to the ongoing investigations the amounts estimated may be subject to revaluation. Earnings targets for the Group for 2015 will be adjusted

accordingly.

Volkswagen does not tolerate any kind of violation of laws whatsoever. It is and remains the top priority of the Board of Management to win back lost trust and to avert damage to our customers. The Group will inform the public on the further progress of the investigations constantly and transparently.

Ms.Meetu Kaul, Attorney-Advisor
United States Environmental Protection Agency Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A) Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

-----Original Message-----
From: Werner, Jacqueline
Sent: Tuesday, September 22, 2015 7:28 AM
To: Kaul, Meetu; Orehowsky, Gregory; Belser, Evan
Cc: Kelley, Rosemarie; Shinkman, Susan; Brooks, Phillip
Subject: News report: VW sets aside $7 billion

To address emissions scandal as the investigation allegedly spreads to Europe and Asia. Also according to Good Morning America- 11 million cars were equipped with suspect emissions software.

Sent from my iPhone

Jacqueline Robles Werner
Associate Director
Air Enforcement Division
W: 202-564-1036

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Ex. 6
Sent: Tue 9/22/2015 12:04:55 PM
Subject: Fwd: Breaking News: Volkswagen says 11 million cars worldwide are affected in diesel deception

Go for it

Ex. 6

Sent from my iPhone

Begin forwarded message:

From: NYTimes.com News Alert <nytdirect@nytimes.com>
Date: September 22, 2015 at 6:56:19 AM EDT
To: Ex. 6
Subject: Breaking News: Volkswagen says 11 million cars worldwide are affected in diesel deception

Add nytdirect@nytimes.com to your address book.

September 22, 2015

NYTimes.com »

Breaking News Alert

September 22, 2015

BREAKING NEWS

Volkswagen says 11 million cars worldwide are affected in diesel deception

Tuesday, September 22, 2015 6:52 AM EDT

Volkswagen said on Tuesday that 11 million diesel cars worldwide were equipped with the same software that was used to cheat on emissions tests in the United States. The company issued a de facto profit warning because of the costs of

ADVERTISEMENT

repairing vehicles to comply with pollution standards.
The statement was the carmaker's first admission that diesel cars outside the United States may have the software that led the Environmental Protection Agency to accuse the carmaker of deliberately evading pollution tests. Previously, the company had acknowledged only that the problem affected about 500,000 vehicles in the United States.
Volkswagen said it would set aside 6.5 billion euros, or about $7.3 billion, to cover the cost of servicing the affected vehicles "and other efforts to win back the trust of our customers." The money would be booked in the third quarter, Volkswagen said.
The German carmaker said that "a noticeable deviation between bench-test results and actual road use was established" for 11 million so-called Type EA 189 engines. Other diesel cars made by the company have the same engine management software, but it has no effect, Volkswagen said.
Read more »

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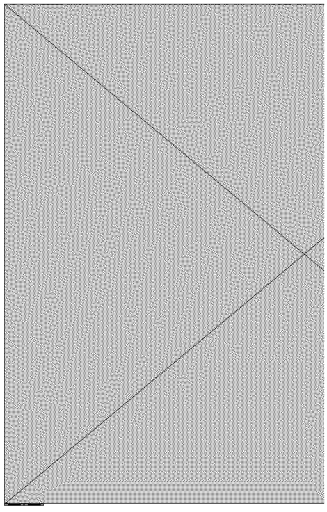

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Bunker, Byron
Sent: Tue 9/22/2015 12:15:30 PM
Subject: RE: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

Ex. 7

****
Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623
****

-----Original Message-----
From: Grundler, Christopher
Sent: Tuesday, September 22, 2015 7:59 AM
To: Bunker, Byron
Subject: Re: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

Ex. 7

Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 22, 2015, at 7:32 AM, Bunker, Byron <bunker.byron@epa.gov> wrote:
>

Ex. 7

>
> **********
> Byron Bunker
> Director Compliance Division
> Office of Transportation and Air Quality Environmental Protection
> Agency
> 2000 Traverwood Drive
> Ann Arbor, MI 48105
> Bunker.Byron@epa.gov
> Phone: (734) 214-4155
> Mobile: (734) 353-9623
> **********
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> -----Original Message-----
> From: Grundler, Christopher
> Sent: Tuesday, September 22, 2015 7:12 AM
> To: Bunker, Byron; Birgfeld, Erin; Cook, Leila; Conger, Nick; Millett,
> John; Wehrly, Linc; Simon, Karl; Blubaugh, Jim
> Subject: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are

> Affected in Diesel Deception
>
> http://www.nytimes.com/2015/09/23/business/international/volkswagen-di
> esel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share
>
> The company said that the software that let its diesel car engines defeat emissions tests was used worldwide, and that it had set aside about $7.3 billion to fix vehicles.
>
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: .WASH WI-2 Weber, Michael[wi-2@wash.auswaertiges-amt.de]
From: Phillips, Anna
Sent: Tue 9/22/2015 12:17:08 PM
Subject: Re: EPA charges against VW

Michael, I have shared your questions with relevant EPA experts and I will let you know as soon as I receive their response.

Best,

Anna

~~~~~~

Anna Phillips

Program Manager for Europe
U.S. Environmental Protection Agency (EPA)

Office of International & Tribal Affairs

Washington, D.C. 20460

Tel: (+1) 202.564.6419 Fax: (+1) 202.565.2427

e-mail: phillips.anna@epa.gov

http://www2.epa.gov/international-cooperation

~~~~~~

From: .WASH WI-2 Weber, Michael <wi-2@wash.auswaertiges-amt.de>
Sent: Monday, September 21, 2015 1:44 PM
To: Phillips, Anna
Subject: EPA charges against VW

Dear Anna,

Good seeing you this morning. As briefly discussed, here are our questions regarding the Volkswagen law suit:

1. What is the judicial/legal process that will now follow (and how is the interplay between EPA and DoJ)?

2. Apart from a federal law suit, is there a possibility that Volkswagen will also face further court action by individual states (or even class action litigation)?

3. We understand the clean air act is the basis for EPA's action. Could you provide us with an overview of similar actions against car makers over the last years which were based on violations of the clean air act?

Many thanks for your help in this time sensitive matter.

Michael

Michael Weber

Energy Policy Advisor

Embassy of the Federal Republic of Germany

4645 Reservoir Road NW

Washington, DC 20007

Tel: +1 (202) 298 4381

Fax: +1 (202) 298 4391

E-mail: wi-2@wash.diplo.de

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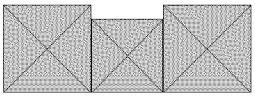
www.Germany.info



INVALID HTML

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 12:17:35 PM
Subject: VW Says 11M Cars Affected Globally in Scandal
MAIL_CONVERSATION_TOPIC: VW Says 11M Cars Affected Globally in Scandal
Created: Fri 3/18/2016 6:18:21 PM

Volkswagen AG said irregularities on diesel- emission readings extend to 11 million vehicles around the world, forcing the German carmaker to set aside 6.5 billion euros ($7.3 billion) in an initial tally of the potential costs.

View article...

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 12:19:27 PM
Subject: This VW Diesel Scandal Is Much Worse Than a Recall
MAIL_CONVERSATION_TOPIC: This VW Diesel Scandal Is Much Worse Than a Recall
Created: Fri 3/18/2016 6:18:20 PM

This isn't cost-cutting. This is outright cynical deceit.

View article...

To: Blubaugh, Jim[Blubaugh.Jim@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 12:20:21 PM
Subject: Re: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

I need to see materials. I thought it was one on one

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 22, 2015, at 8:02 AM, Blubaugh, Jim <Blubaugh.Jim@epa.gov> wrote:
>
> The meeting is on Monday at 11:15 for about 30 mins. I will plan to attend.
>
> Jim
>
>
> -----Original Message-----
> From: Grundler, Christopher
> Sent: Tuesday, September 22, 2015 8:00 AM
> To: Blubaugh, Jim
> Subject: Re: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception
>
> When is EU Commissioner coming to EPA?
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)
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>>
>> Jim
>>
>>
>>
>>
>> Jim Blubaugh, Director
>> International Programs
>> Office of Transportation and Air Quality U.S. Environmental Protection
>> Agency
>> (202) 564-5403
>>
>> -----Original Message-----
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>> Sent: Tuesday, September 22, 2015 7:12 AM
>> To: Bunker, Byron; Birgfeld, Erin; Cook, Leila; Conger, Nick; Millett,
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>> Christopher Grundler, Director
>> Office of Transportation and Air Quality U.S. EPA
>> 202-564-1682 (DC)
>> 734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Blubaugh, Jim
Sent: Tue 9/22/2015 12:26:06 PM
Subject: RE: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

I think there is still some back-n-forth on the 3rd floor on whether it will be a one-on-one or not. If it is not, I will be ready to attend.

I'm waiting on any materials as well. I will certainly pass your way if/when I receive any. We did forward to OITA the VW NOV and with Byron's help, I pulled out a few sentences from the NOV as draft talking points. OITA is pulling background info together for the Administrator.

I will let you know if I hear anything.

Jim

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From: Grundler, Christopher
Sent: Tuesday, September 22, 2015 8:20 AM
To: Blubaugh, Jim
Subject: Re: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

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>> Christopher Grundler, Director
>> Office of Transportation and Air Quality U.S. EPA
>> 202-564-1682 (DC)
>> 734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 12:26:50 PM
Subject: Fwd: (VW) CNN Fwd: Press Inquiry from CNN about emission testing

Ex. 6 but wanted to forward this for your consideration.

Ex. 5, 7

Sent from my iPhone

Begin forwarded message:

From: "Valentine, Julia" <Valentine.Julia@epa.gov>
Date: September 22, 2015 at 7:53:10 AM EDT
To: "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Millett, John" <Millett.John@epa.gov>, "Senn, John" <Senn.John@epa.gov>
Subject: (VW) CNN Fwd: Press Inquiry from CNN about emission testing

For tracking, and because most are on immediate deadlines, I'm going to use the above subject line for all immediate requests: (VW) name of outlet.

If it is a longer than ASAP deadline, I'll add that right after (VW).

Please see below.

Sent from USEPA iPhone

Begin forwarded message:

From: "Isidore, Chris" <Chris.Isidore@turner.com>
Date: September 22, 2015 at 6:56:43 AM EDT
To: "valentine.julia@epa.gov" <valentine.julia@epa.gov>
Subject: Press Inquiry from CNN about emission testing

I understand that EPA has started testing vehicles made by other automakers to see if they have the same kind of deceptive software giving false readings as VW now has

admitted to doing. Is that correct? If so which automakers are being tested? Are they being tested due to evidence suggesting they might also be guilty of the deception, or simply as a precaution to make sure they're following the law? And is it only diesel vehicles being tested, or are gasoline engines also being tested? If you are not the right press spokesperson to answer these questions, please let me know who with the EPA public affairs staff I should contact. And please get back to me as soon as possible this morning. Thanks very much for your help.

Chris Isidore

Senior Writer

CNNMoney

O: (212) 275-7797

C: (917) 583-6031

chris.isidore@turner.com

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: energy@morningconsult.cpro30.com
Sent: Tue 9/22/2015 12:47:18 PM
Subject: Morning Consult Energy, Presented by the American Coalition for Clean Coal Electricity: Senate Democrats to Unveil Clean Energy Package; Volkswagen Comes Under More Scrutiny

By Davis Burroughs

Today's Washington Brief

- Senate Democrats, led by Sen. Maria Cantwell (Wash.), ranking member of the Senate Energy and Natural Resources Committee, will unveil a clean energy package today that is expected to be aggressive on climate change by establishing as U.S. policy a reduction of greenhouse gas emissions by 2 percent each year through 2025. The bill outlines which policies Democrats might pursue if they regain control of the Senate. (New York Times)

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For Decades, Exxon Mingled with the Climate Science Elite
Inside Climate News

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Senate Democrats to Unveil Aggressive Climate Change Bill
Coral Davenport, The New York Times

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Volkswagen became the world's top-selling carmaker trumpeting the environmental friendliness, fuel efficiency and high performance of diesel-powered vehicles that met America's tough Clean Air laws.

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Reid Wilson, Morning Consult

The Interior Department on Tuesday will walk a careful tightrope when it issues a long-awaited decision involving a chicken-like bird and tens of millions of acres of valuable Western land.

Apple Speeds Up Electric-Car Efforts
Daisuke Wakabayashi, The Wall Street Journal

Apple Inc. is accelerating efforts to build an electric car, designating it internally as a "committed project" and setting a target ship date for 2019, according to people familiar with the matter.

S&P 500 Futures Fall Amid Global Slump in Auto, Health Shares
Roxana Zega, Bloomberg News

Futures on the Standard & Poor's 500 Index fell, mirroring equities in Europe, as Volkswagen AG's diesel-emissions cheating scandal continues to rattle global auto stocks… S&P 500 contracts expiring in December lost 1.4 percent to 1935.75 at 7:51 a.m. in New York. Dow Jones Industrial Average contracts retreated 218 points, or 1.3 percent, to 16,239.

Oil & Natural Gas

Oil sinks on uncertain global outlook
Reuters

Crude oil prices fell on Tuesday, reversing a steep rally the previous day, under pressure from uncertainty over whether global demand will be enough to erode a sky-high surplus.

Utilities & Infrastructure

Canada's AltaGas to Buy Three California Power Plants
Chester Dawson, The Wall Street Journal

Canadian natural-gas processor and utility operator AltaGas Ltd. said Monday it will buy three gas-fired electric power plants in California for US$642 million from a fund run by Oaktree Capital Group.

Renewables

NRG reaches for reset button — again — as it plans 'GreenCo'
Edward Klump, E&E

The CEO of NRG Energy Inc., David Crane, is embarking on a reboot of his multifaceted power company as it copes with a continuing stock price plunge.

Coal

Judge refuses to strike lyrics critical of coal from Peabody Energy complaint
Taylor Kuykendall, SNL

A federal judge denied Peabody Energy Corp.'s attempt to strike the lyrics of a 1970s

protest song from a suit alleging the company engaged in a civil conspiracy to retaliate against free speech and was connected to an unlawful arrest at an April 2013 shareholders meeting.

European Coal Prices Slump to a Record Low
Rachel Morison, Bloomberg News

European coal for 2016 dropped below $50 a metric ton for the first time amid slumping demand from China, the biggest consumer.

Australia's New Hope sees coal deals accelerating in next 12 months
Sonali Paul, Reuters

Australian coal miner New Hope Corp, which has a war chest for potential acquisitions, said it expects coal mine deals to pick up over the next year as buyers' and sellers' views on the outlook for the battered sector start to converge.

Nuclear

LA's Nuclear Secret: Part 1
Joel Grover and Matthew Glasser, NBC4

The U.S. government secretly allowed radiation from a damaged reactor to be released into air over the San Fernando and Simi valleys in the wake of a major nuclear meltdown in Southern California more than 50 years ago — fallout that nearby residents contend continues to cause serious health consequences and, in some cases, death.

Climate

Scientists calculate the dramatic economic cost of a warming Arctic
Chelsea Harvey, The Washington Post

Scientists calculate that emissions from thawing permafrost could cost the world $43 trillion over the next 200 years.

How the former head of Shell Argentina turned to clean energy
Marina Aizen, The Guardian

In June, Juan José Aranguren left Shell after 37 years; he had spent the last two decades running the company's Argentinian division. The ex-hardman of the oil industry is now firmly pro-decarbonisation, and promotes the use of energy which will not contribute to further global warming.

Ranks of companies setting an internal price on CO2 emissions almost triple in a year
Daniel Cusick, E&E

The number of large companies placing an internal price on carbon emissions nearly tripled over the last year, from 150 to 437 firms globally, according to new data released this morning by CDP, the U.K.-based nonprofit that tracks corporate-sector greenhouse gas emissions.

A Message from the American Coalition for Clean Coal Electricity:

Supporting energy policies that raise prices on consumers is a political loser. Thirty-six Members of Congress lost their seats after voting for the highly unpopular 2009 cap and trade legislation. Now cap and trade is back in the form of President Obama's costly and illegal carbon plan. Find out what history holds for supporters of costly carbon policies like the president's plan.

Opinions, Editorials & Perspectives

Industry Can Lead on Climate Change
Joe Kaeser, The New York Times

A number of major companies — from PepsiCo to Walmart to U.P.S. — have recognized that corporations have a responsibility to address the causes of climate change before it is too late.

How Plastics-to-Fuel Can Become the Next Green Machine
Doug Woodring and Steve Russell, Live Science

We all know plastics deliver many benefits that make modern life possible. They help keep our foods fresher longer, reduce the weight of our cars so we use less fuel, insulate our homes so we use less energy, and keep countless medical supplies safe and sterile. While some plastics are recycled, far too many are not — and end up buried in landfills or littered where they can enter delicate marine ecosystems.

Pope Francis's Crusade Against Fossil Fuels Hurts The Poor Most Of All
Alex Epstein, Forbes

"The earth, our home, is beginning to look more and more like an immense pile of filth." This was Pope Francis's summary of his Encyclical earlier this year on the alleged destruction of our planet. The leading culprit, in his view, is humanity's use of fossil fuels, which he believes are immoral and should largely be illegal.

A Message from the American Coalition for Clean Coal Electricity:

President Obama's costly carbon plan is nothing more than a redo of his failed 2009 cap and trade legislation. This illegal plan is the most overreaching energy regulation in our nation's history and a political loser for any public official that supports it. Cap and trade advocates paid for their support with their seats in 2010. See what's in store for staunch supporters of the president's carbon plan this time around.

Research Reports, Issue Briefs & Case Studies

U.S. propane inventories are at an all-time high
Stacy MacIntyre, Energy Information Administration

U.S. inventories of propane and propylene reached 97.7 million barrels as of September 11, the highest level in the 22 years that EIA has collected weekly propane inventory statistics. In the first six months of 2015, U.S. propane and propylene inventories were 24.3 million barrels higher on average compared to the same period in 2014. In the past year, nearly all of the increase in inventories occurred in the Gulf Coast region (PADD3).

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The Morning Consult
Morning Consult, P.O. Box 27068
Washington District of Columbia 20038
United States

This email is intended for grundler.christopher@epa.gov.
Update your preferences or Unsubscribe

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: energy@morningconsult.cpro30.com
Sent: Tue 9/22/2015 12:47:18 PM
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Roxana Zega, Bloomberg News

Futures on the Standard & Poor's 500 Index fell, mirroring equities in Europe, as Volkswagen AG's diesel-emissions cheating scandal continues to rattle global auto stocks… S&P 500 contracts expiring in December lost 1.4 percent to 1935.75 at 7:51 a.m. in New York. Dow Jones Industrial Average contracts retreated 218 points, or 1.3 percent, to 16,239.

Oil & Natural Gas

Oil sinks on uncertain global outlook
Reuters

Crude oil prices fell on Tuesday, reversing a steep rally the previous day, under pressure from uncertainty over whether global demand will be enough to erode a sky-high surplus.

Utilities & Infrastructure

Canada's AltaGas to Buy Three California Power Plants
Chester Dawson, The Wall Street Journal

Canadian natural-gas processor and utility operator AltaGas Ltd. said Monday it will buy three gas-fired electric power plants in California for US$642 million from a fund run by Oaktree Capital Group.

Renewables

NRG reaches for reset button — again — as it plans 'GreenCo'
Edward Klump, E&E

The CEO of NRG Energy Inc., David Crane, is embarking on a reboot of his multifaceted power company as it copes with a continuing stock price plunge.

Coal

Judge refuses to strike lyrics critical of coal from Peabody Energy complaint
Taylor Kuykendall, SNL

A federal judge denied Peabody Energy Corp.'s attempt to strike the lyrics of a 1970s

protest song from a suit alleging the company engaged in a civil conspiracy to retaliate against free speech and was connected to an unlawful arrest at an April 2013 shareholders meeting.

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Rachel Morison, Bloomberg News

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Australia's New Hope sees coal deals accelerating in next 12 months
Sonali Paul, Reuters

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LA's Nuclear Secret: Part 1
Joel Grover and Matthew Glasser, NBC4

The U.S. government secretly allowed radiation from a damaged reactor to be released into air over the San Fernando and Simi valleys in the wake of a major nuclear meltdown in Southern California more than 50 years ago — fallout that nearby residents contend continues to cause serious health consequences and, in some cases, death.

Climate

Scientists calculate the dramatic economic cost of a warming Arctic
Chelsea Harvey, The Washington Post

Scientists calculate that emissions from thawing permafrost could cost the world $43 trillion over the next 200 years.

How the former head of Shell Argentina turned to clean energy
Marina Aizen, The Guardian

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Daniel Cusick, E&E

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Industry Can Lead on Climate Change
Joe Kaeser, The New York Times

A number of major companies — from PepsiCo to Walmart to U.P.S. — have recognized that corporations have a responsibility to address the causes of climate change before it is too late.

How Plastics-to-Fuel Can Become the Next Green Machine
Doug Woodring and Steve Russell, Live Science

We all know plastics deliver many benefits that make modern life possible. They help keep our foods fresher longer, reduce the weight of our cars so we use less fuel, insulate our homes so we use less energy, and keep countless medical supplies safe and sterile. While some plastics are recycled, far too many are not — and end up buried in landfills or littered where they can enter delicate marine ecosystems.

Pope Francis's Crusade Against Fossil Fuels Hurts The Poor Most Of All
Alex Epstein, Forbes

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U.S. propane inventories are at an all-time high
Stacy MacIntyre, Energy Information Administration

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United States

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To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: energy@morningconsult.cpro30.com
Sent: Tue 9/22/2015 12:47:46 PM
Subject: Morning Consult Energy, Presented by the American Coalition for Clean Coal Electricity: Senate Democrats to Unveil Clean Energy Package; Volkswagen Comes Under More Scrutiny

By Davis Burroughs

Today's Washington Brief

- Senate Democrats, led by Sen. Maria Cantwell (Wash.), ranking member of the Senate Energy and Natural Resources Committee, will unveil a clean energy package today that is expected to be aggressive on climate change by establishing as U.S. policy a reduction of greenhouse gas emissions by 2 percent each year through 2025. The bill outlines which policies Democrats might pursue if they regain control of the Senate. (New York Times)

- The Obama administration will unveil today a package of initiatives aimed at expediting the government's reviews of infrastructure such as bridges and energy projects. (The Wall Street Journal)

- The Interior Department is likely to leave the sage grouse off the Endangered Species List today when it issues a long-awaited decision, which will likely spark a wave of litigation over environmental protection and land rights across Western states. (Morning Consult)

Today's Business Brief

- More details emerged regarding Volkswagen's alleged violation of U.S. air laws. The EPA said that the German automaker purposefully thwarted air emissions rules for seven years, with some tests showing that their vehicles emitted up to 40 times more pollution into the air than allowed under federal law. (Associated Press)

- Residents of San Fernando and Simi Valley in California say they're still being exposed to toxic radiation from a nuclear accident that happened more than half-a-century ago. (NBC)

- Following yesterday's rally, oil prices reversed course this morning amid fears that global demand will not be able to keep pace with the crude oil surplus. (Reuters)

Today's Chart Review

For Decades, Exxon Mingled with the Climate Science Elite
Inside Climate News

Mark Your Calendars (All Eastern Times)

Tuesday
Conference on ecology & transportation @ 7:30 a.m.
Center for Offshore Safety forum @ 8:30 a.m.
ACEE national conference on energy efficiency @ 8 a.m.
API conference on federal taxes that affect the oil & gas industry @ 8 a.m.
Politico event titled "What Works D.C." @ 8 a.m.
NRC public meeting on operator licensing for new reactors @ 8:30 a.m.
C2ES event on climate change resilience in business @ 9 a.m.
RTI forum on shale oil and gas @ 9 a.m.
FERC settlement conference for Duke Energy Carolinas @ 10 a.m.
USEA briefing on global gas markets @ 10:30 a.m.
CESA webinar on tax credits for community solar @ 1 p.m.
FERC public meeting on Oregon LNG Terminal & Pipeline Project @ 9 p.m.

Wednesday
Conference on ecology & transportation @ 6 a.m.
Center for Offshore Safety forum @ 8 a.m.
Sen. Homeland Security Regulatory Affairs Subcommittee hearing on agencies' use of regulatory guidance @ 11 a.m.
AWEA webinar on yieldcos @ 12 p.m.
NRC public meeting on the proposed fuel cycle cybersecurity rule @ 3 p.m.
FERC public meeting on Oregon LNG Terminal & Pipeline Project @ 9 p.m.

Thursday
Conference on ecology & transportation @ 7:30 a.m.
NRC public meeting on proposed Emergency Preparedness FAQs @ 8:30 a.m.
AWEA webinar on recommended practices for turbine end-of-warranty inspections @ 12 p.m.
Heritage discussion of Xi Jinping's upcoming visit @ 3 p.m.
FERC public meeting on Oregon LNG Terminal & Pipeline Project @ 9 p.m.

Friday
NRC public meeting on the Revised Fuel Cycle Oversight Process @ 8:30 a.m.
CSIS discussion of global natural gas markets @ 10 a.m

General

Senate Democrats to Unveil Aggressive Climate Change Bill
Coral Davenport, The New York Times

Though the measure will not pass the Republican-controlled Congress, Democrats say they hope that forcefully pushing for climate change policies could help them in 2016.

White House to Unveil Initiatives to Speed Infrastructure Reviews
Amy Harder, The Wall Street Journal

The Obama administration Tuesday is unveiling a package of new initiatives aimed at speeding up the federal government's reviews of infrastructure such as bridges and energy projects, a process that businesses often complain is protracted and redundant.

For 7 years, VW software thwarted pollution regulations
Tom Krisher and Frank Jordans, The Associated Press

Volkswagen became the world's top-selling carmaker trumpeting the environmental friendliness, fuel efficiency and high performance of diesel-powered vehicles that met America's tough Clean Air laws.

Volkswagen Stock Falls as Automaker Tries to Contain Fallout
Jack Ewing, The New York Times

The company's stock plunged on Monday after disclosures that it had illegally installed software that misrepresented pollution levels certain models emitted.

Interior Likely to Leave Sage Grouse Off Endangered List
Reid Wilson, Morning Consult

The Interior Department on Tuesday will walk a careful tightrope when it issues a long-awaited decision involving a chicken-like bird and tens of millions of acres of valuable Western land.

Apple Speeds Up Electric-Car Efforts
Daisuke Wakabayashi, The Wall Street Journal

Apple Inc. is accelerating efforts to build an electric car, designating it internally as a "committed project" and setting a target ship date for 2019, according to people familiar with the matter.

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United States

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Automotive News
Sent: Tue 9/22/2015 12:51:53 PM
Subject: A.M. NEWSCAST: VW to set aside $7.3B as scandal grows | U.S. boss: 'We have totally screwed up' | GM, Delphi work on 2-cylinder tech | Hyundai's SEMA peek | Passat updated

September 22, 2015

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Detroit, MI 48207-2997 United States
customerservice@autonews.com

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Automotive News
Sent: Tue 9/22/2015 12:52:10 PM
Subject: A.M. NEWSCAST: VW to set aside $7.3B as scandal grows | U.S. boss: 'We have totally screwed up' | GM, Delphi work on 2-cylinder tech | Hyundai's SEMA peek | Passat updated

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customerservice@autonews.com

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Conger, Nick[Conger.Nick@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Senn, John
Sent: Tue 9/22/2015 12:55:28 PM
Subject: Re: Volkswagen discrepancy

Thanks Meetu. OTAQ can answer and the press office will respond to the reporter.

Sent from my iPhone

On Sep 22, 2015, at 7:32 AM, "Kaul, Meetu" <Kaul.Meetu@epa.gov> wrote:

> Forwarding one (of several) emails/inquiries specific to the discrepancy in the models listed. Including Nick and John as this is from a reporter
>
> ---
>
> Ms.Meetu Kaul, Attorney-Advisor
>
> United States Environmental Protection Agency
> Office of Civil Enforcement - Air Enforcement Division
> WJC South, Room 1117B
> 1200 Pennsylvania Ave., N.W. (MC 2242A)
> Washington D.C. 20460 (Courier 20004)
> Direct: 202-564-5472
> Fax: 202-564-0069
> Email: kaul.meetu@epa.gov
>
> **From:** Yerak, Becky [mailto:byerak@chicagotribune.com]
> **Sent:** Monday, September 21, 2015 5:40 PM
> **To:** Kaul, Meetu
> **Cc:** Karp, Gregory P.
> **Subject:** Volkswagen discrepancy
>
> Hi Kaul:

The EPA news release and letter of violation don't match on which VW models are affected.

Am I reading the letter wrong?

News release:

http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/dfc8e33b5ab162b985257ec4

Notice of violation:

http://www3.epa.gov/otaq/cert/documents/vw-nov-caa-09-18-15.pdf

For example, the chart in the letter does not list 2009 Beetle, Audi A3 or Golf, as the news release does.

However, the letter lists the 2012 Passat, but the news release does not.

Can you explain the discrepancies?

Becky Yerak

Note: new work email address as of 8/29/14: byerak@**chicago**tribune.com

becky.yerak@gmail.com

Business reporter

Chicago Tribune

435 N. Michigan Ave.

Chicago, IL 60611

Live: Work phone: 1-312-222-**4283** Cell**:** 1-312-823-7514 **Home phone**: **Ex. 6**

Slightly disembodied:

<image001.png> LinkedIn <image002.png> Twitter <image003.png> Google Plus <image004.gif> Facebook Page <image005.png> Pinterest

Blog: ChiFinance

<image006.gif>

Leo

My daily horoscope:

via Yahoo! Shine

To: Ex. 7
Cc:
From: Grundler, Christopher
Sent: Tue 9/22/2015 12:59:03 PM
Subject: Re: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

Correction: WE are

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 22, 2015, at 8:57 AM Ex. 7 wrote:

Way to go EPA! You are saving the world.

-----Original Message-----
From: Grundler, Christopher [grundler.christopher@epa.gov]
Received: Tuesday, 22 Sep 2015, 4:12AM
To: Ex. 7
Ex. 7
Subject: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

http://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share

The company said that the software that let its diesel car engines defeat emissions tests was used worldwide, and that it had set aside about $7.3 billion to fix vehicles.

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Ex. 5

Ex. 5

Ex. 5

From: "Isidore, Chris" <Chris.Isidore@turner.com>
Date: September 22, 2015 at 6:56:43 AM EDT
To: "valentine.julia@epa.gov" <valentine.julia@epa.gov>
Subject: Press Inquiry from CNN about emission testing

I understand that EPA has started testing vehicles made by other automakers to see if they have the same kind of deceptive software giving false readings as VW now has admitted to doing. Is that correct? If so which automakers are being tested? Are they being tested due to evidence suggesting they might also be guilty of the deception, or simply as a precaution to make sure they're following the law? And is it only diesel vehicles being tested, or are gasoline engines also being tested? If you are not the right press spokesperson to answer these questions, please let me know who with the EPA public affairs staff I should contact. And please get back to me as soon as possible this morning. Thanks very much for your help.

Chris Isidore

Senior Writer

CNNMoney

O: (212) 275-7797

C: (917) 583-6031

chris.isidore@turner.com

To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Shannon Baker-Branstetter[SBaker-Branstetter@consumer.org]
From: Ellen Bloom
Sent: Tue 9/22/2015 1:00:29 PM
Subject: Fwd: VW links

Great talking to you. Jake Fisher, head of our Auto Test division, might also reach out to you. Let's keep chatting.

Thanks,

Ellen

Here's what Consumer Reports Online has run as well as Consumerist. They are in the order of when they were published, earliest to latest:
CRO:
VW, Audi Cited by EPA for Cheating on Diesel Emissions Tests
Volkswagen Emissions Cheat Exploited 'Test Mode'

Consumerist:
Volkswagen Ordered To Recall 500K Vehicles Over Emission Violations
Consumer Reports Suspends "Recommended" Status For Recalled VW Vehicles
VW To Stop Selling Vehicles Affected By Emissions System Recall
Yes, Owners Of Recalled Volkswagens Can File Deceptive Marketing Complaints With The FTC
Justice Dept. Considering Criminal Charges Against Volkswagen

--

Ellen Bloom
Senior Director, Federal Policy & Washington Office
Consumers Union
p: 202-462-6262
f: 202-265-9548

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Medick, Veit
Sent: Tue 9/22/2015 1:03:31 PM
Subject: Questions VW Diesel

Dear Mr. Kaul,

great work on VW, congratulations. We are working on a longer piece about the affair and have several questions. Would you be available today for a short interview off the record? By phone or face-to-face - whatever you like? Would be great.

Hope to hear from you, Veit Medick

Veit Medick

Senior correspondent

SPIEGEL ONLINE

1202 National Press Building

Washington DC 20045

Tel: 202-705-5994

@vmedick

To: Reynolds, Thomas[Reynolds.Thomas@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Valentine, Julia[Valentine.Julia@epa.gov]; Millett, John[Millett.John@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Purchia, Liz
Sent: Tue 9/22/2015 1:05:07 PM
Subject: Fwd: ABC NEWS - Interview instructions....

Liz Purchia
U.S. EPA
202-564-6691
202-841-2230

Begin forwarded message:

From: "Steinberger, Daniel" <Daniel.Steinberger@abc.com>
Date: September 22, 2015 at 9:02:35 AM EDT
To: "Purchia, Liz" <Purchia.Liz@epa.gov>
Subject: Re: ABC NEWS - Interview instructions....

Fyi...We plan to use interview tonight ...he was very good btw

On Sep 21, 2015, at 7:18 PM, Steinberger, Daniel <Daniel.Steinberger@abc.com> wrote:

> Our affiliate service - which services 200 plus stations across the country will also put it out
>
> On Sep 21, 2015, at 6:59 PM, Purchia, Liz <Purchia.Liz@epa.gov> wrote:
>
> > Thanks for the update. Are you doing anything with it for the web or radio?
> >
> > Liz Purchia
> > U.S. EPA
> > 202-564-6691
> > 202-841-2230
> >
> > On Sep 21, 2015, at 6:45 PM, Steinberger, Daniel <Daniel.Steinberger@abc.com> wrote:

Thanks for the help today.

WELL –

After all that – I am forced to send the note I hate to write.

They had to kill our story really late – other news sadly bumped us out.

My sincerest apologies.

Hope we can do something with you again soon – please keep me up to date on what happens with this.

Best,

Daniel

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 4:20 PM
To: Steinberger, Daniel
Subject: Re: ABC NEWS - Interview instructions....

Leaving now

Liz Purchia

U.S. EPA

202-564-6691

202-841-2230

On Sep 21, 2015, at 3:48 PM, Steinberger, Daniel <Daniel.Steinberger@abc.com> wrote:

We are at 1717 DeSales Street NW

Opposite the Mayflower hotel

My cell is Ex. 6 – when you get here – ask for me – thanks again, see you soon!

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 2:30 PM
To: Steinberger, Daniel
Subject: RE: ABC NEWS

If you were to send a camera crew when would that be?

Could you share specific questions?

From: Steinberger, Daniel [mailto:Daniel.Steinberger@abc.com]
Sent: Monday, September 21, 2015 2:08 PM
To: Purchia, Liz
Subject: RE: ABC NEWS

Yikes!

Can you call me please – Ex. 6

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 2:06 PM
To: Steinberger, Daniel
Subject: Re: ABC NEWS

Sorry Janet is in Arkansas.

We don't have anyone for you to speak with today. I'd recommend an auto reporter who could speak on the issue.

Dave shepardson at the Detroit news follows this closely

Liz Purchia

U.S. EPA

202-564-6691

202-841-2230

On Sep 21, 2015, at 1:54 PM, Steinberger, Daniel <Daniel.Steinberger@abc.com> wrote:

Any luck? We'd really love to have you on this.

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 1:12 PM
To: Steinberger, Daniel
Subject: RE: ABC NEWS

Checking. Could you send specific questions you'd like to ask? Who would conduct the interview and where?

From: Steinberger, Daniel [mailto:Daniel.Steinberger@abc.com]
Sent: Monday, September 21, 2015 1:05 PM
To: Purchia, Liz
Subject: RE: ABC NEWS

Yes. on camera – if not the head – is there a #2 or #3?

Doing story today.

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 1:02 PM
To: Steinberger, Daniel
Subject: RE: ABC NEWS

Are you looking for an on-camera interview?

The head of our enforcement office is in China.

From: Steinberger, Daniel [mailto:Daniel.Steinberger@abc.com]
Sent: Monday, September 21, 2015 1:00 PM
To: Purchia, Liz
Subject: RE: ABC NEWS

Any interview you would be willing to give us?

From: Purchia, Liz [mailto:Purchia.Liz@epa.gov]
Sent: Monday, September 21, 2015 12:59 PM
To: Steinberger, Daniel
Subject: FW: ABC NEWS

Hi Daniel – Our ability to comment on VW is limited due to the ongoing investigation.

Sent from USEPA iPhone

Begin forwarded message:

From: "Steinberger, Daniel" <Daniel.Steinberger@abc.com>

Date: September 21, 2015 at 12:31:33 PM EDT
To: Press <press@epa.gov>
Subject: ABC NEWS

Anybody around for a short interview today on VW for ABC WORLD NEWS TONIGHT.

Please get back to me ASAP.

Thanks,

Daniel Steinberger

ABC NEWS
Ex. 6

To: Cook, Leila[cook.leila@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]
From: Nancy Kruger
Sent: Tue 9/22/2015 1:10:25 PM
Subject: VW defeat devices

Hi Lee,

You're probably already on this, but can Chris please also address the VW defeat device issue in his remarks at the NACAA meeting?

Thanks.

-Nancy

Nancy Kruger

Deputy Director

National Association of Clean Air Agencies

444 North Capitol Street, NW

Suite 307

Washington, DC 20001

tel: (202) 624-7864

fax: (202) 624-7863

nkruger@4cleanair.org

www.4cleanair.org

To: Bunker, Byron[bunker.byron@epa.gov]
From: Tim Cheyne
Sent: Tue 9/22/2015 1:14:43 PM
Subject: Please join me to discuss the impact of the VW defeat device revelations

Industry experts discuss the impact of the VW revelations

No Images? **Click here**

FREE WEBINAR: THE INTEGER VIEW

The impact of the latest VW revelations

Dear Byron,

I would like to invite you to a free webinar >> hosted by Integer Research taking place this Wednesday 23rd September 2015 analysing the impact of the VW emissions 'defeat device' revelations. I will be presenting this webinar personally alongside my colleague Adam Panayi, Emissions Research Manager, and together we will answer the following key questions:

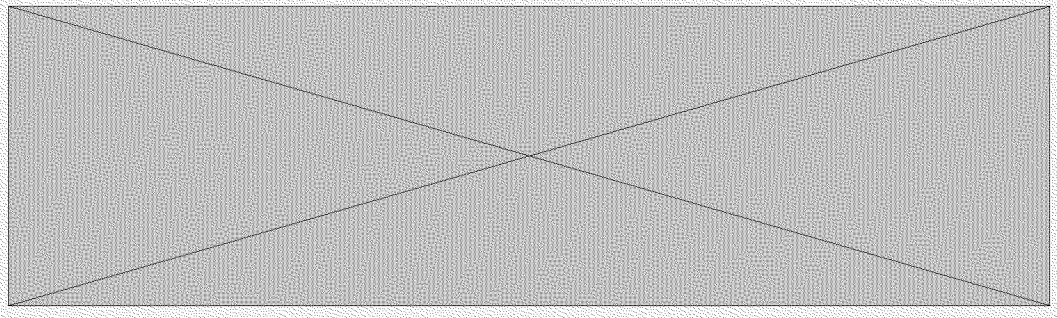
- What has VW admitted to doing?
- What is cycle beating and how is it possible under US regulations?
- How do US regulations differ to Europe?
- What does all this mean for the use of emissions control technologies (and DEF/AdBlue)?
- Question + Answer session

Register for the webinar now >>
(Don't worry if you can't make it, simply register and we'll send you a link to watch the full recording afterwards).

Adam and I look forward to welcoming you to this essential webinar - a chance for industry experts and key players to discuss the significance of this breaking news together.

REGISTER FOR THE WEBINAR HERE>>

Kind regards,
Tim Cheyne, Managing Director Integer Research
Adam Panayi, Emissions Research Manager



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- DEF Demand Outlook Service »
- DEF Tracker >>
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- The Monitor »
- Download our Emissions product portfolio (PDF) >>

REGISTER FOR THE WEBINAR

Wednesday 23rd September 2015
3pm UK time - (20 mins + Q&A)

Can't make it? Please register anyway >> - we'll send you a link to the recording

Questions?
publications@integer-research.com
+44 (0)20 7503 1265

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Invicta House, 108-114 Golden Lane, London, EC1Y 0TL, UK
www.integer-research.com

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.

To: Greuel, Justin[Greuel.Justin@epa.gov]
From: Tim Cheyne
Sent: Tue 9/22/2015 1:14:43 PM
Subject: Please join me to discuss the impact of the VW defeat device revelations

Industry experts discuss the impact of the VW revelations

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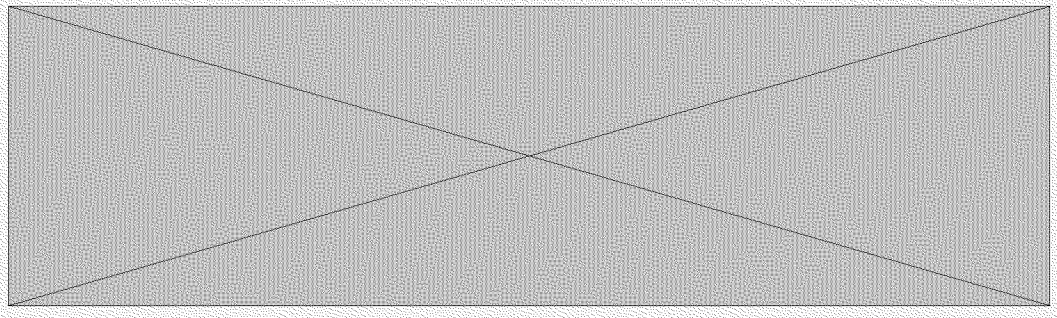
REGISTER FOR THE WEBINAR HERE>>

Kind regards,
Tim Cheyne, Managing Director Integer Research
Adam Panayi, Emissions Research Manager



Related research + conferences

- 8th Integer Emissions Summit & DEF Forum USA 2015 >>
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3pm UK time - (20 mins + Q&A)

Can't make it? Please register anyway >> - we'll send you a link to the recording

Questions?
publications@integer-research.com
+44 (0)20 7503 1265

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Invicta House, 108-114 Golden Lane, London, EC1Y 0TL, UK
www.integer-research.com

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From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 1:17:24 PM
Subject: VW Says 11M Cars Affected Globally
MAIL_CONVERSATION_TOPIC: VW Says 11M Cars Affected Globally
Created: Fri 3/18/2016 6:18:20 PM

Volkswagen AG said irregularities on diesel- emission readings extend to 11 million vehicles around the world, forcing the German carmaker to set aside 6.5 billion euros ($7.3 billion) in an initial tally of the potential costs.

View article...

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 1:17:39 PM
Subject: VW's $7 Billion Screw-up: A Lesson In How To Destroy A Brand
MAIL_CONVERSATION_TOPIC: VW's $7 Billion Screw-up: A Lesson In How To Destroy A Brand
Created: Fri 3/18/2016 6:18:20 PM

As many as 11 million vehicles worldwide might be affected by software that U.S. regulators say cheated clean air rules.

View article...

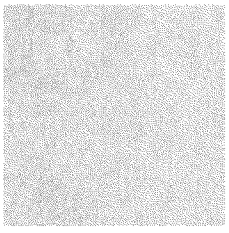
To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Pat Quinn
Sent: Tue 9/22/2015 1:19:29 PM
Subject: Re: NYTimes: Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception

Just unbelievable.

Sent from my iPad

> On Sep 22, 2015, at 7:17 AM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>
> http://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html?smprod=nytcore-iphone&smid=nytcore-iphone-share
>
> The company said that the software that let its diesel car engines defeat emissions tests was used worldwide, and that it had set aside about $7.3 billion to fix vehicles.
>
>
> Christopher Grundler, Director
> Office of Transportation and Air Quality
> U.S. EPA
> 202-564-1682 (DC)
> 734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Tue 9/22/2015 1:22:31 PM
Subject: Volkswagen says 11 million cars worldwide are affected in diesel deception
NYTimes VW 11 million.pdf



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Ex. 4 - CBI (Contractor)

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory Library

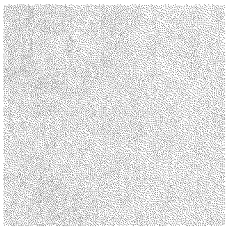
2000 Traverwood Drive

Ann Arbor, MI 48105

Ex. 4 - CBI

Ex. 4 - CBI

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Ex. 4 - CBI
Sent: Tue 9/22/2015 1:25:28 PM
Subject: Automotive News on the VW 11 million diesel news.
AutoNews VW says 11 million diesel.pdf



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Ex. 4 - CBI (Contractor)

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory Library

2000 Traverwood Drive

Ann Arbor, MI 48105

Ex. 4 - CBI

Ex. 4 - CBI

To: Hengst, Benjamin[Hengst.Benjamin@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]
From: Blubaugh, Jim
Sent: Tue 9/22/2015 1:26:58 PM
Subject: EU Commissioner Vella meeting with EPA Administrator -- September 28th at 11:15 a.m.

Ben,

Per our discussion this morning the Administrator is scheduled to meet with EU Commissioner Vella on Monday, September 28th at 11:15 AM for about 30 mins. Although the agenda has been a moving target from what I currently understand the meeting will include a very *brief* discussion of the following:

Non-Responsive

But, we believe that the Commissioner will raise the VW case as a discussion point. Chris mentioned that he would like you to attend this meeting since you have been in all the VW meetings on messaging, etc… I have shared the VW NOV with OITA (who is pulling together background materials for the Administrator for this meeting.) I will let OITA know that if the Administrator would like to have staff there then you will attend. If so, be prepared to answer some questions that the Commissioner may have on VW.

Non-Responsive

Let me know if you have any questions.

Thanks,

Jim

Jim Blubaugh, Director

International Programs

Office of Transportation and Air Quality

U.S. Environmental Protection Agency

(202) 564-5403

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Senn, John
Sent: Tue 9/22/2015 1:31:41 PM
Subject: RE: Request for Interview from Spiegel Online - FW: Questions VW Diesel

Thanks, Meetu—have sent this along to the press office…they will follow up w/the reporter and let us know any next steps/deadlines.

From: Kaul, Meetu
Sent: Tuesday, September 22, 2015 9:27 AM
To: Belser, Evan; Werner, Jacqueline; Senn, John; Conger, Nick
Subject: Request for Interview from Spiegel Online - FW: Questions VW Diesel

---

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Medick, Veit [mailto:veit.medick@spiegel.de]
Sent: Tuesday, September 22, 2015 9:04 AM
To: Kaul, Meetu
Subject: Questions VW Diesel

Dear Mr. Kaul,

great work on VW, congratulations. We are working on a longer piece about the affair and have several questions. Would you be available today for a short interview off the record? By phone or face-to-face - whatever you like? Would be great.

Hope to hear from you, Veit Medick

Veit Medick

Senior correspondent

SPIEGEL ONLINE

1202 National Press Building

Washington DC 20045

Tel: 202-705-5994

@vmedick

To: Purchia, Liz[Purchia.Liz@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 1:37:33 PM
Subject: Fwd: VW update

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Begin forwarded message:

From: "Millett, John" <Millett.John@epa.gov>
Date: September 22, 2015 at 9:32:15 AM EDT
To: "McCabe, Janet" <McCabe.Janet@epa.gov>, "Grundler, Christopher" <grundler.christopher@epa.gov>, "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>, "Stewart, Lori" <Stewart.Lori@epa.gov>
Subject: VW update

ABC didn't have room for the VW story on last night's broadcast, but will try to fit it in tonight, they said, while complimenting Chris on the interview.

Moving the story along today will be VW's admission that the same defeat device was used on 11 million diesel vehicles worldwide.

With the surge in international coverage (VW is the top story on BBC.com), op-eds, and many blogs and news outlets doing multiple updates, the google news article count is now pushing 3,000.

We're confirming today that we will be testing other diesel passenger vehicles besides the makes and models listed in the NOV, so that is apt to be folded into the ongoing coverage today.

Great NYT headline today: "It Took E.P.A. Pressure to Get VW to Admit Fault"

~~~~~~~~~~~~~~~~~

John Millett

Director, OAR Communications

Desk: 202-564-2903

Cell: 202-510-1822
~~~~~~~~~~~~~~~~~

To: Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Conger, Nick
Sent: Tue 9/22/2015 1:51:28 PM
Subject: It Took E.P.A. Pressure to Get VW to Admit Fault

It Took E.P.A. Pressure to Get VW to Admit Fault

The New York Times

By BILL VLASIC and AARON M. KESSLER

Sept 21, 2015

Volkswagen executives told environmental regulators for more than a year that discrepancies between pollution tests on its diesel cars and the starkly higher levels out on the road were a technical error, not a deliberate attempt to deceive Washington officials.

But this month, the executives made a startling admission: The diesel vehicles it sold in the United States used software meant to cheat on the tests.

VW made the admission only when the Environmental Protection Agency took the extraordinary action of threatening to withhold approval for the company's 2016 Volkswagen and Audi diesel models, according to letters sent to company officials by the E.P.A. and California regulators.

Since that deception became public on Friday, Volkswagen has scrambled to conduct damage control. The chief executive apologized and the company said it would stop selling diesel-powered cars from the 2015 and 2016 model years.

All this was possible because environmental regulators had tools and powers at their disposal that another area of enforcement — auto safety regulation — does not have, despite the efforts of lawmakers, consumer advocates and, more recently, auto safety regulators themselves. Often, the auto industry has beaten back more stringent laws.

The National Highway Traffic Safety Administration, for example, can impose a maximum

penalty of $35 million on an automaker that flouts safety regulations — a relatively low sum for a company like General Motors, which last year paid such a fine for a defect that has now been linked to at least 124 deaths.

By contrast, under the Clean Air Act, Volkswagen, the world's largest automaker, could be fined as much as $37,500 for each recalled vehicle, for a possible total penalty of as much as $18 billion.

"The Clean Air Act statutory scheme gives E.P.A. more power and flexibility to move more quickly than N.H.T.S.A.," said Carl Tobias, a law professor at the University of Richmond, who has studied the government's response to auto safety issues. "E.P.A. also seems more tough-minded and savvy about how to be effective in this arena."

Still, the time it takes to investigate auto companies is often extensive, and getting the facts can be a challenge. "Even E.P.A. took a year to finally crack this case open," he said.

Beyond the E.P.A., the government has other tools at its disposal when it comes to enforcing environmental regulation.

As G.M. did, Volkswagen now faces a criminal investigation by the Justice Department, according to a person briefed on the inquiry. It is being conducted, though, by the department's Environment and Natural Resources Division, which is devoted to violations of environmental law. "Nearly one-half of the division's lawyers bring cases against those who violate the nation's civil and criminal pollution-control laws," the department's website says.

And on Monday, a subcommittee of the House Energy and Commerce Committee said it would hold a hearing on the issue.

It's only part of the pressure being applied to Volkswagen. An official with the Environmental Protection Agency said that discussions are continuing with Volkswagen, as the company grapples with how to handle a recall of the affected vehicles.

"We still have many questions for the company," said Christopher Grundler, head of the agency's transportation office. "It's the responsibility of Volkswagen and Audi to prepare a remedy for these vehicles."

There is no timetable for Volkswagen to submit a comprehensive plan to recall and fix the affected vehicles. But government officials are urging the company to take action quickly — both on developing a fix for the cars and starting a campaign to educate consumers on the problem.

"This does not happen immediately," Mr. Grundler said. "And we've been trying to be clear with the consumers that their vehicles are safe and they don't have to do anything right now." The assessment of fines for the violations will also not happen immediately. "That is down the road," he said.

"But we feel a sense of urgency to address the emissions of these vehicles that are already on the road."

A Volkswagen spokesman, John Schilling, said the automaker was "committed to fixing this issue as soon as possible" and to developing "a remedy that meets emissions standards and satisfies our loyal and valued customers."

Even with the looming punishment, the company almost got away with it. In fact, it most likely would have if not for a strange twist of fate and the curiosity of several auto researchers.

Two years ago, the International Council on Clean Transportation, a nonprofit environmental group staffed by a number of former E.P.A. officials, had been testing the real-world performance of so-called clean diesel cars in Europe, and were less than impressed with the emissions results.

The group decided it would test diesel-powered cars in the United States, where regulations were

much more strict, as a way of almost shaming the European automakers to tighten their compliance. The group fully expected the American cars to do well, and run cleaner than their counterparts across the pond.

What they could not have foreseen was that they would stumble onto one of the biggest frauds in recent automotive history.

Further, on the campus of West Virginia University, a group of emissions researchers who mainly dealt with heavy trucks noticed an unusual posting by the transportation council, which was looking for a partner to test diesel-powered cars.

"No one had done that before in the U.S.," said Arvind Thiruvengadam, a professor at the university. "It sounded very interesting, to test light-duty diesel vehicles in real-world conditions. We looked around at each other said, 'Let's do it.' "

The university's team bid on the project and got the contract. Mr. Thiruvengadam and his colleagues never envisioned where it would lead. "We certainly didn't have an aim of catching a manufacturer cheating," he said. "It didn't even cross our minds."

The study also did not target Volkswagen specifically. It was something of a fluke, he said, that two out of three diesel vehicles bought for the testing were VWs.

It did not take long for suspicions to set in. The West Virginia researchers were well-versed in diesel performance on real roads, and had certain expectations for how the test cars should ebb and flow in their emissions. But the two Volkswagens behaved strangely.

"If you're idling in traffic for three hours in L.A. traffic, we know a car is not in its sweet spot for good emissions results," Mr. Thiruvengadam said. "But when you're going at highway speed at 70 miles an hour, everything should really work properly. The emissions should come down. But the Volkswagens didn't come down."

Even then, however, it is difficult for most researchers to be sure exactly what is going on. There are so many factors involved in real-world driving — speed, temperature, topography, braking habits. It is not unheard-of for cars to perform much differently in on-the-road tests than one expected.

But this time there was a key difference: The California Air Resources Board heard about the groups' tests and signed on to participate. The regulators tested the same vehicles in their specially equipped lab used to judge cars' compliance with state emissions standards. That gave the project what most studies lacked: a baseline.

"That broke loose everything," Mr. Thiruvengadam said.

In the lab, the two VWs performed flawlessly. But when they were taken out on the roads in California, they were belching out levels of nitrogen oxide that were 30 to 40 times higher than the regulatory standards. Even the heavy-duty trucks the researchers had tested had never performed that poorly by comparison.

"It just didn't make sense," said John German, one of the leaders on the project at the transportation council. "That was the real red flag for us."

Nick Conger

Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

Office: (202) 564-6287

Cell: (202) 412-2655

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To: Belser, Evan[Belser.Evan@epa.gov]
From: Fisherow, Walter Benjamin (ENRD)
Sent: Tue 9/22/2015 1:51:50 PM
Subject: Re: Volkswagen Hearing

Am briefing associate AG IN10 minutes. Will call after.

Sent from my iPhone

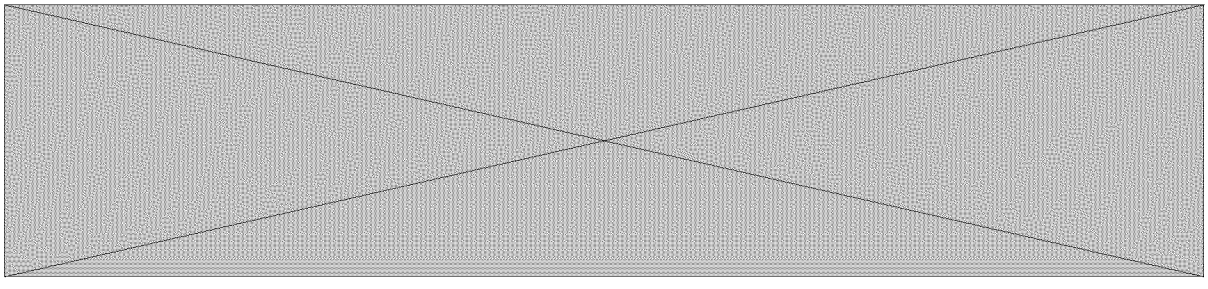
On Sep 21, 2015, at 9:26 PM, Belser, Evan <Belser.Evan@epa.gov> wrote:

See below. Details to follow. Ex. 5

Ex. 5

Evan

From: Energy and Commerce News
[mailto:ECNews@ECREP.housecommunications.gov]
Sent: Monday, September 21, 2015 4:44 PM
To: Spencer, Peter
Subject: Volkswagen Hearing



FOR IMMEDIATE RELEASE
September 21, 2015

CONTACT: Press Office
(202) 226-4972

Upton, Murphy Announce Hearing on Volkswagen Emissions Issues

WASHINGTON, DC – House Energy and Commerce Committee Chairman Fred Upton (R-MI) and Oversight and Investigations Subcommittee Chairman Tim Murphy (R-PA) today announced that the Oversight and Investigations Subcommittee will hold a hearing in the coming weeks on

recently discovered issues with Volkswagen diesel engines (sold from 2008-2015) that resulted in emissions levels exceeding state and federal limits throughout the United States.

"Strong emissions standards are in place for the benefit of public health. Manufacturers throughout the United States, and across the world, have developed leading technologies to reduce airborne emissions within the limits set by EPA and state environmental agencies. However, reported EPA allegations that certain Volkswagen models contained software to defeat auto emissions tests raise serious questions," said **Upton and Murphy.** "We will follow the facts. We are also concerned that auto consumers may have been deceived – that what they were purchasing did not come as advertised. The American people deserve answers and assurances that this will not happen again. We intend to get those answers."

More information about the Oversight and Investigation Subcommittee's hearing, including date, time, a background memo, and witness list and testimony, will be posted here as they are available.

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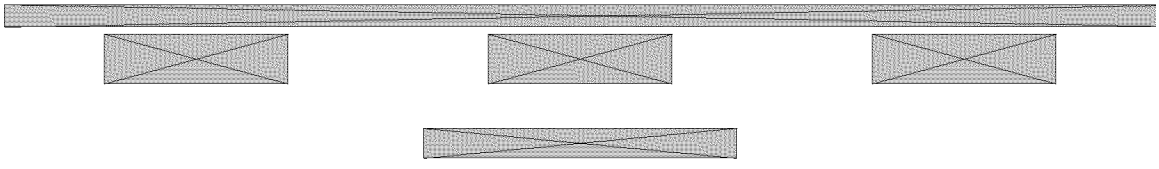

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Ex. 5

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Medick, Veit [mailto:veit.medick@spiegel.de]
Sent: Tuesday, September 22, 2015 9:04 AM
To: Kaul, Meetu
Subject: Questions VW Diesel

Dear Mr. Kaul,

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Veit Medick

Senior correspondent

SPIEGEL ONLINE

1202 National Press Building

Washington DC 20045

Tel: 202-705-5994

@vmedick

To: Belser, Evan[Belser.Evan@epa.gov]
Cc: Senn, John[Senn.John@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 2:03:31 PM
Subject: FW: Request for Interview from Spiegel Online - FW: Questions VW Diesel

Evan, John sent the below

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Senn, John
Sent: Tuesday, September 22, 2015 9:32 AM
To: Kaul, Meetu
Subject: RE: Request for Interview from Spiegel Online - FW: Questions VW Diesel

Ex. 5

From: Kaul, Meetu
Sent: Tuesday, September 22, 2015 9:27 AM
To: Belser, Evan; Werner, Jacqueline; Senn, John; Conger, Nick
Subject: Request for Interview from Spiegel Online - FW: Questions VW Diesel

Ms.Meetu Kaul, Attorney-Advisor

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Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
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Email: kaul.meetu@epa.gov

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Veit Medick

Senior correspondent

SPIEGEL ONLINE

1202 National Press Building

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@vmedick

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ganss, David
Sent: Tue 9/22/2015 2:04:23 PM
Subject: RE: Downfall parody of VW diesels

You're right. It's exploding.

It's a great opportunity also for you guys.

Do you think it's a good thing that its so big?

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, September 22, 2015 10:01 AM
To: Ganss, David <GanssD@nrd.nissan-usa.com>
Subject: RE: Downfall parody of VW diesels

I knew this would be a big deal but its ballooning beyond what I could envision. I think management thought this would be one news cycle and they wanted to get in ahead of the Pope but it's not fading away.

From: Ganss, David [mailto:GanssD@nrd.nissan-usa.com]
Sent: Monday, September 21, 2015 10:47 AM
To: Fernandez, Antonio; Snyder, Jim; Ellies, Ben; Fernandez, Antonio
Subject: FW: Downfall parody of VW diesels

If you're familiar with the Downfall (Hitler's bunker scene) parody meme, you'll like this:

https://youtu.be/dKef1JFpiCA

David Ganss

Nissan Technical Center North America

A Division of Nissan North America, Inc.

Senior Engineer

Powertrain Technology Research

ganssd@ntcna.nissan-usa.com

PH: +1 248.488.4414

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: NGT News
Sent: Tue 9/22/2015 2:23:16 PM
Subject: NGV Experts Discuss Federal Policy Landscape

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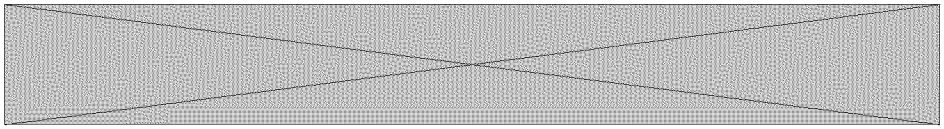

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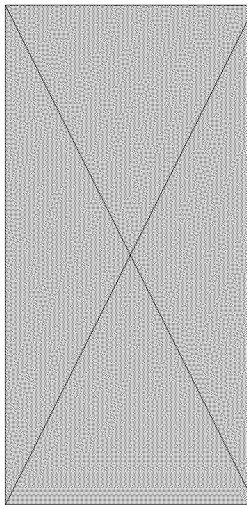
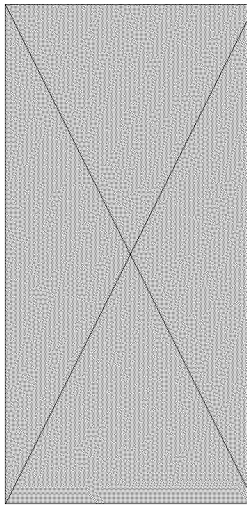
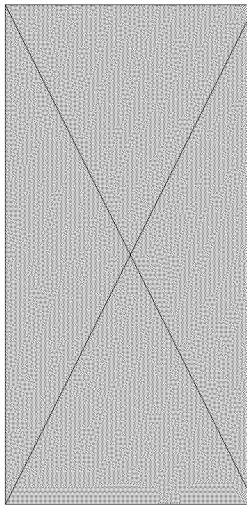
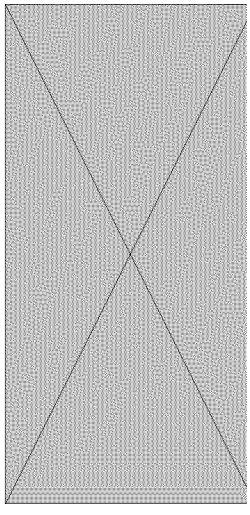
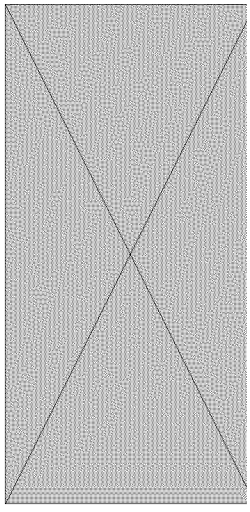






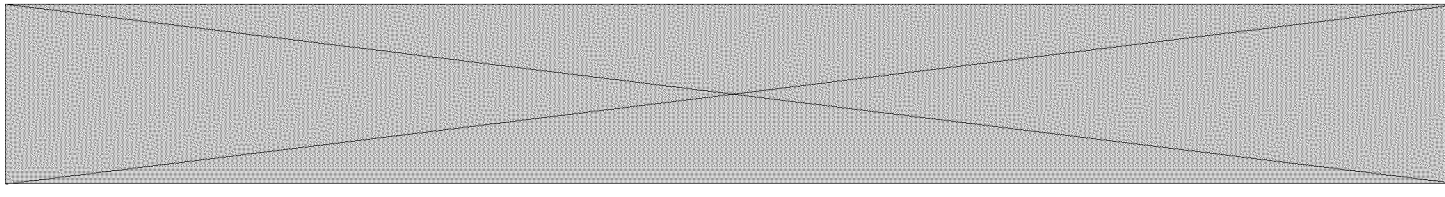




NGV Experts Discuss Federal Policy Landscape

on 22 Sep 2015 by Joseph Bebon

Last week, a group of natural gas vehicle (NGV) policy experts discussed recent federal roadblocks and successes for the U.S. NGV market and other alternative fuel industries. The panelists, talking at the North American Natural Gas Vehicle Conference and Expo in Denver, offered a mix of optimism and pessimism about what's to come from lawmakers in [read more]



Mississippi's First LNG Refueling Station Goes Online

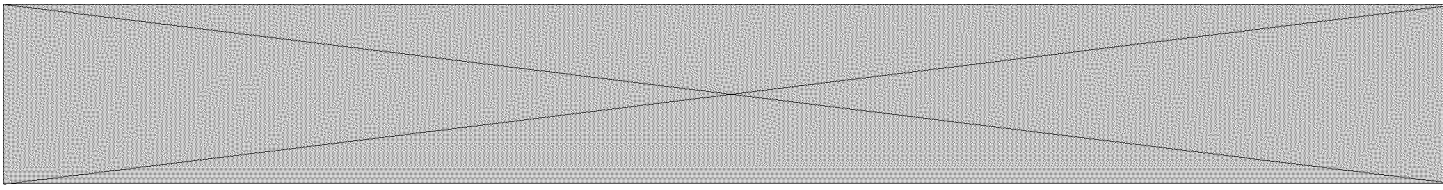
on 21 Sep 2015 by NGTNews

Clean Energy Fuels Corp. recently joined project partners and elected officials to celebrate the opening of the first liquefied natural gas (LNG) station in Mississippi with a ribbon-cutting ceremony. Located within the Flying J Travel Plaza at 685 US-80 in Pearl, Miss., the public-access station will support the fueling needs of Raven Transport's 115 LNG heavy-duty [read more]

Volkswagen Called on the Carpet for U.S. Emissions Violations

on 21 Sep 2015 by NGTNews

The U.S. Environmental Protection Agency (EPA) has issued a notice of violation (NOV) of the Clean Air Act to Volkswagen AG, Audi AG, and Volkswagen Group of America Inc. (collectively referred to as Volkswagen) regarding a diesel vehicle emissions scandal. For its part, Volkswagen has issued a public apology and vowed to work with the authorities, [read more]



APG Nets Follow-On Orders for Natural Gas Dual-Fuel Systems

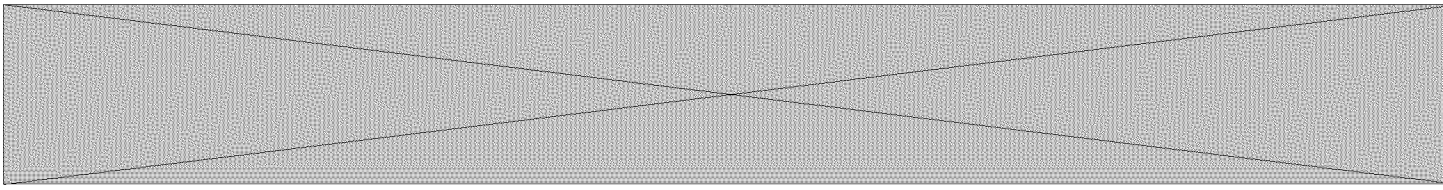
on 21 Sep 2015 by NGTNews

American Power Group Inc. (APG) has received follow-on orders from Harrison Truck Centers (HTC) for 35 of APG's Turbocharged Natural Gas dual-fuel systems for HTC's new line of dual-fuel heavy-duty and severe-duty glider kits. In collaboration with WheelTime Network's Interstate Power Systems, HTC will install APG's dual-fuel systems and associated natural gas storage tanks at HTC's [read more]

Delaware Project Expands Statewide EV Charging Network

on 18 Sep 2015 by NGTNews

Under a collaborative partnership called "Charging Up Delaware," the University of Delaware (UD) and the Delaware Department of Natural Resources and Environmental Control (DNREC) have installed 11 new electric vehicle (EV) charging stations at five locations throughout the state. According to UD, the state is now home to 21 locations that host charging stations. "Delaware's network [read more]



DOE Awards $55 Million for Advanced Vehicle Technologies

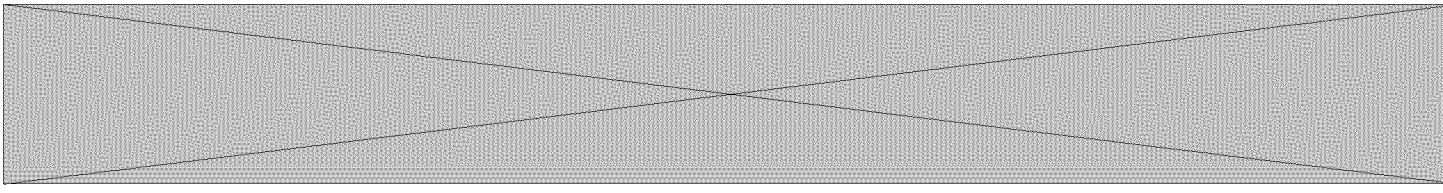
on 18 Sep 2015 by NGTNews

The U.S. Department of Energy (DOE) has awarded nearly $55 million to 24 projects to develop and deploy cutting-edge vehicle technologies. The DOE says the funding will go toward a wide range of research, development and demonstration projects that aim to reduce the price and improve the efficiency of plug-in electric, alternative fuel, and conventional vehicles. [read more]

Partners Work on State-Funded Project for Cleaner Natural Gas Engines

on 18 Sep 2015 by NGTNews

Thanks, in part, to a $749,868 grant from the California Energy Commission (CEC), Enerpulse Technologies has partnered with Power Solutions International (PSI) to further reduce emissions from natural-gas-powered engines. Enerpulse says the CEC grant is helping the company develop its C2 ignition system. According to the CEC, "ignition characteristics of natural gas fuel represent challenges to [read more]



Tech to Convert Forest Waste into Natural Gas Debuts in Placer County

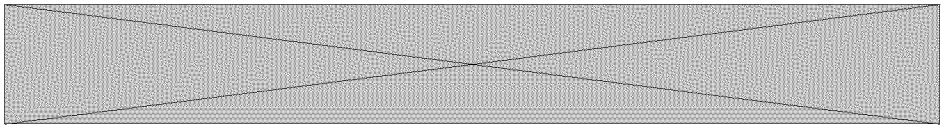
on 17 Sep 2015 by NGTNews

Earlier this week, project partners demonstrated a new technology for converting forest waste into

converts scraps and small trees from forest thinning projects into a renewable natural gas called biomethane. In its first public demonstration, G4 used gas produced on-site to [read more]

on 17 Sep 2015 by NGTNews

VNG.co was recently awarded a grant by the Colorado Energy Office (CEO), in partnership with the Regional Air Quality Council and the Colorado Department of Transportation, to build a fast-fill compressed natural gas (CNG) fueling facility in downtown Denver. VNG says the station will be co-located within a major oil branded gasoline station featuring a convenience [read more]



Research Team to Build DME-Powered Passenger Car

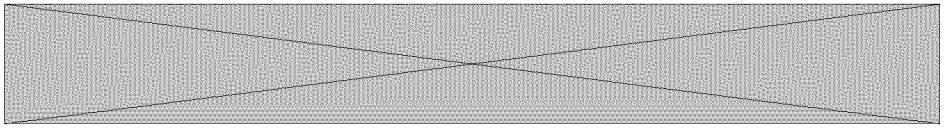
on 17 Sep 2015 by NGTNews

Oberon Fuels Inc., a California-based producer of fuel-grade dimethyl ether (DME), has announced it is partnering with Ford Motor Co., Forschungsvereinigung Verbrennungskraftmaschinen e. V. (FVV), and other FVV member companies on a three-year, EUR 3.5 million (approximately $4 million) project to research, analyze and test the potential of DME and oligomethyl ether (OME) fuel in passenger [read more]

Alabama Nuclear Plant Installs EV Charging Stations

on 17 Sep 2015 by NGTNews

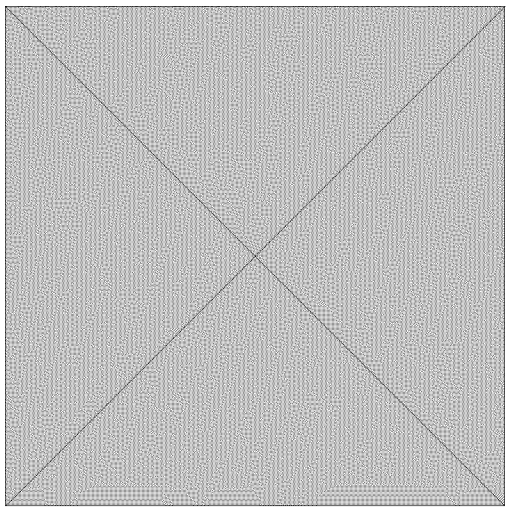
Southern Nuclear, a subsidiary of Southern Co., has unveiled dual electric vehicle charging stations at the Joseph M. Farley Nuclear Plant near Dothan, Ala. The company says the stations will charge 10 electric and/or plug-in hybrid vehicles for employees while they work. "Charging an electric vehicle at home currently costs about $1 for 35 miles of [read more]

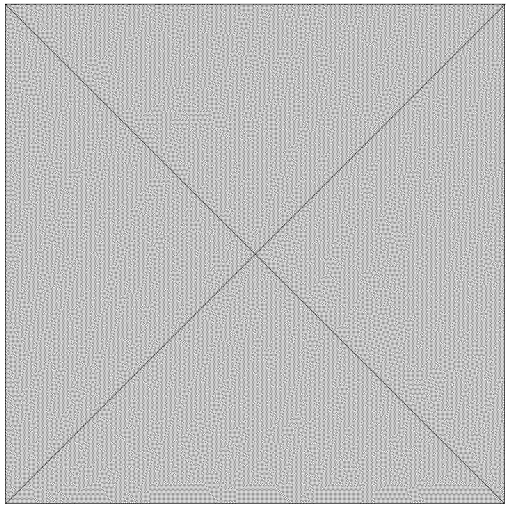


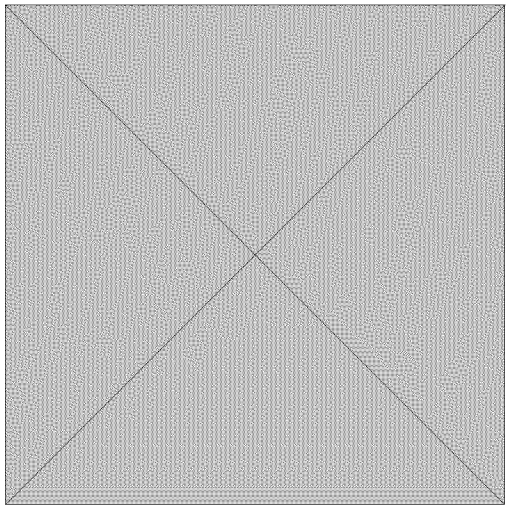
Report: Electric Transportation Could Lead to Major Emissions Cuts

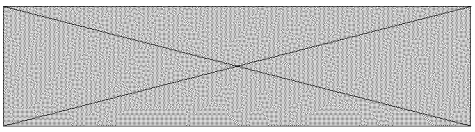
on 17 Sep 2015 by NGTNews

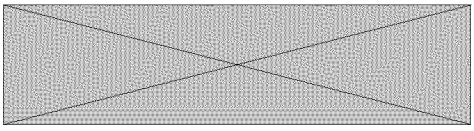
The Electric Power Research Institute (EPRI) and the Natural Resources Defense Council (NRDC) have released an analysis that finds widespread adoption of electric transportation, including electrification in the off-road sector, could lead to substantial reductions in greenhouse-gas (GHG) emissions and improve air quality. The report, "Environmental Assessment of a Full Electric Transportation Portfolio," projects GHG emissions [read more]

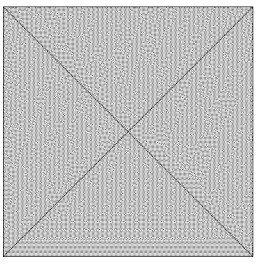


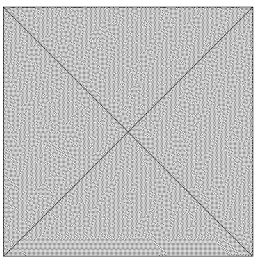


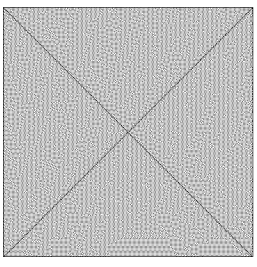


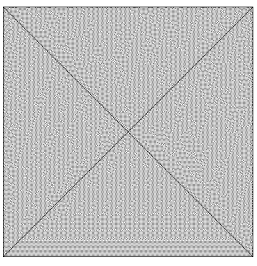


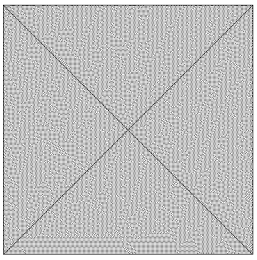


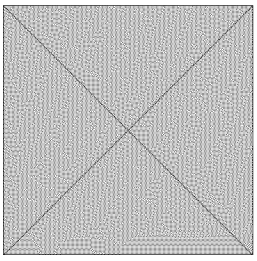


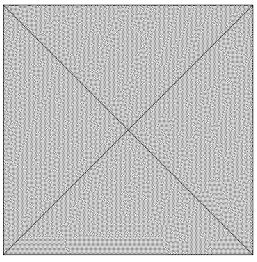


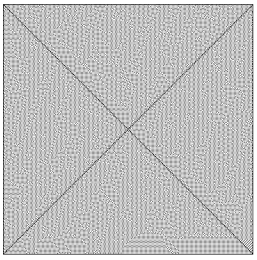


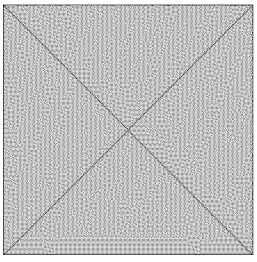


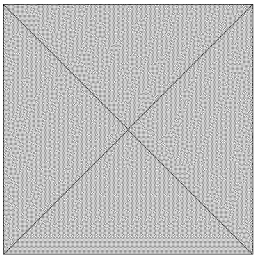


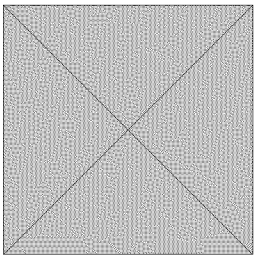


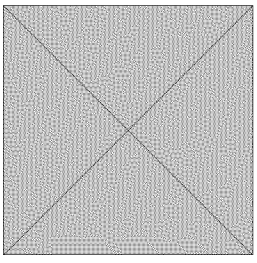


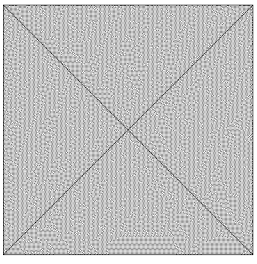


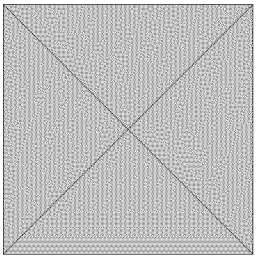












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To: Phillips, Anna[Phillips.Anna@epa.gov]
Cc: .WASH VERK-1 Zass, Stephan Klaus[verk-1@wash.auswaertiges-amt.de]
From: .WASH WI-2 Weber, Michael
Sent: Tue 9/22/2015 2:24:24 PM
Subject: AW: EPA charges against VW
removed.txt

Dear Anna,

Thanks for helping out on this matter.

The German Ministry for Transportation and Digital Infrastructure has established a task force under the chairmanship of State Secretary Michael Odenwald. The State Secretary would like to speak with the responsible EPA representatives. I am including my transport colleague Stephan Zass who will be able to give you further information and get you in touch with his German colleagues.

I hope you are able to help us out organizing a call or video conference.

Many thanks,

Michael

Michael Weber

Energy Policy Advisor

Embassy of the Federal Republic of Germany

4645 Reservoir Road NW

Washington, DC 20007

Tel: +1 (202) 298 4381

Fax: +1 (202) 298 4391

E-mail: wi-2@wash.diplo.de

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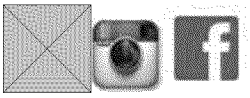

Von: Phillips, Anna [mailto:Phillips.Anna@epa.gov]
Gesendet: Dienstag, 22. September 2015 08:17
An: .WASH WI-2 Weber, Michael
Betreff: Re: EPA charges against VW

Michael, I have shared your questions with relevant EPA experts and I will let you know as soon as I receive their response.

Best,

Anna

~~~~~~

Anna Phillips

Program Manager for Europe
U.S. Environmental Protection Agency (EPA)

Office of International & Tribal Affairs

Washington, D.C. 20460
~~~~~~

Tel: (+1) 202.564.6419 Fax: (+1) 202.565.2427

e-mail: phillips.anna@epa.gov

http://www2.epa.gov/international-cooperation

~~~~~~

From: .WASH WI-2 Weber, Michael <wi-2@wash.auswaertiges-amt.de>
Sent: Monday, September 21, 2015 1:44 PM
To: Phillips, Anna
Subject: EPA charges against VW

Dear Anna,

Good seeing you this morning. As briefly discussed, here are our questions regarding the Volkswagen law suit:

1. What is the judicial/legal process that will now follow (and how is the interplay between EPA and DoJ)?

2. Apart from a federal law suit, is there a possibility that Volkswagen will also face further court action by individual states (or even class action litigation)?

3. We understand the clean air act is the basis for EPA's action. Could you provide us with an overview of similar actions against car makers over the last years which were based on violations of the clean air act?

Many thanks for your help in this time sensitive matter.
~~~~~~

Michael

Michael Weber

Energy Policy Advisor

Embassy of the Federal Republic of Germany

4645 Reservoir Road NW

Washington, DC 20007

Tel: +1 (202) 298 4381

Fax: +1 (202) 298 4391

E-mail: wi-2@wash.diplo.de

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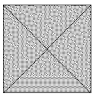

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 2:28:26 PM
Subject: RE: WSJ reporting in Gina VW remarks. Pls send me story

Will do

-----Original Message-----
From: Grundler, Christopher
Sent: Tuesday, September 22, 2015 10:22 AM
To: Birgfeld, Erin
Subject: WSJ reporting in Gina VW remarks. Pls send me story

Christopher Grundler, Director
Office of Transportation and Air Quality U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Shannon Baker-Branstetter[SBaker-Branstetter@consumer.org]; William Wallace[william.wallace@consumer.org]
From: Ellen Bloom
Sent: Tue 9/22/2015 2:29:58 PM
Subject: Fwd: Registering/selling VW diesels

Hi Byron,

Consumer Reports would like to write about the topic of what consumers can do with their VW diesels. To do so, they would like confirmation from EPA that there will be no impediments to consumers trying to sell their cars -- even though there likely will be an emissions-related recall.

Can you help get us an answer we can provide to consumers? They want to write today. Thanks

Ellen

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To: Ellen Bloom[ebloom@consumer.org]
Cc: Shannon Baker-Branstetter[SBaker-Branstetter@consumer.org]; William Wallace[william.wallace@consumer.org]
From: Bunker, Byron
Sent: Tue 9/22/2015 2:31:14 PM
Subject: RE: Registering/selling VW diesels

Hi Ellen,

I will get this question/request routed to our press team and to our state programs team to see if we can help.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Ellen Bloom [mailto:ebloom@consumer.org]

Sent: Tuesday, September 22, 2015 10:30 AM
To: Bunker, Byron
Cc: Shannon Baker-Branstetter; William Wallace
Subject: Fwd: Registering/selling VW diesels

Hi Byron,

Consumer Reports would like to write about the topic of what consumers can do with their VW diesels. To do so, they would like confirmation from EPA that there will be no impediments to consumers trying to sell their cars -- even though there likely will be an emissions-related recall.

Can you help get us an answer we can provide to consumers? They want to write today.
Thanks

Ellen

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To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Nims, Kirk[Nims.Kirk@epa.gov]; Cohen, Janet[cohen.janet@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Simon, Karl[Simon.Karl@epa.gov]; fyip@cdc.gov[fyip@cdc.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 2:35:37 PM
Subject: FW: Volkswagen Clips 9/21/2015

This includes WSJ coverage of the Administrator's remarks yesterday.

From: Gong, Kristiene
Sent: Tuesday, September 22, 2015 10:34 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

WSJ:

http://www.wsj.com/articles/epa-is-upping-its-game-after-volkswagen-allegations-1442929373

EPA is 'Upping its Game' After Volkswagen Allegations

Top administrator is pleased with auto maker's 'aggressive stance' on tackling problem

By JEFFREY SPARSHOTT

Sept. 22, 2015 9:42 a.m. ET

WASHINGTON—The top official at the Environmental Protection Agency said the agency is "upping its game" in the search for possible violations of U.S. pollution rules following allegations that Volkswagen AG circumvented emissions standards.

"We are not going to sit around and worry about whether others have it, we are going to find it," Gina McCarthy said at a Wall Street Journal breakfast Tuesday. "Right now, we are upping our game in terms of going out and doing work to take a look at what we need to do with other vehicles."

The EPA last week accused Volkswagen of dodging air-pollution rules on nearly half a million cars sold in the U.S. The German company has since halted American sales of the diesel-powered cars at issue and apologized for violating customers' trust.

Volkswagen allegedly used software, dubbed a "defeat device," in the cars to make diesel-powered engines appear to have lower levels of emissions than they actually did. About 482,000 Volkswagen diesel-powered cars sold in the U.S. since 2008 were affected.

Ms. McCarthy said the alleged violation was difficult to detect, but she is "pleased Volkswagen is taking such an aggressive stance on admitting the problem and attacking it."

"I think we have to be concerned whether there are other defeat devices out there that we have not been able to detect," she said. But the auto industry is well aware of the pollution rules and has been working to comply.

"I think it will be very difficult for Volkswagen at this point to be looked at as nothing other than an outlier," Ms. McCarthy said.

Detroit Free Press:

http://www.freep.com/story/news/2015/09/21/us-house-panel-hold-hearing-vw/72583066/

Congress to hold hearing on VW air emissions violation

Todd Spangler and Nathan Bomey, Detroit Free Press and USA Today 8:15 p.m. EDT September 21, 2015

WASHINGTON — Congressional investigators will hold a hearing in the coming weeks to take testimony on allegations raised by the U.S. Environmental Protection Agency that Volkswagen sold hundreds of thousands of diesel-powered vehicles with software to get around air emission limits.

U.S. Rep. Fred Upton, who chairs the House Energy and Commerce Committee, said Monday that the committee's Oversight and Investigations Subcommittee will look into the EPA's allegations, which were first raised Friday. VW's stock value plunged Monday in the aftermath of the revelations, which could affect some 500,000 vehicles and potentially result in fines totaling as much as $18 billion.

Volkswagen's CEO said he was "deeply sorry" for violating U.S. emissions standards and on Sunday ordered an external investigation, two days after the EPA accused the automaker of purposefully manipulating emissions tests for almost 500,000 vehicles.

The German automaker ordered its U.S. dealerships to stop selling cars impacted by the probe until its engineers can deliver a fix.

A date was not set for the congressional hearing but Energy and Commerce staff said it would come within the next several weeks.

“Strong emissions standards are in place for the benefit of public health," Upton, R-St. Joseph, and subcommittee Chairman Tim Murphy, R-Pa., said in a joint statement. “We will follow the facts. We are ... concerned that auto consumers may have been deceived — that what they were purchasing did not come as advertised."

As the Free Press reported Friday, the EPA and the state of California accused VW of violating the Clean Air Act by using software in some 482,000 diesel-powered vehicles that could detect when the car was undergoing official emissions testing and turn full emissions controls on only during the test. The effectiveness of pollution control equipment was reduced otherwise.

EPA's violation notice covered model year 2009-15 Jettas, Beetles, Audi A3s and Golfs and

model year 2014-15 Passats.

As a result, Volkswagen had a hand in potentially exposing people to harmful pollutants at levels 40 times the acceptable standard and that could exacerbate respiratory conditions such as asthma, the EPA charges.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn, Volkswagen's CEO, said in a statement. "We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly and completely establish all of the facts of this case."

"We do not and will not tolerate violations of any kind of our internal rules or of the law," Winterkorn said. The company's board takes the allegations "very seriously," he said.

The violations could expose Volkswagen — the world's largest vehicle manufacturer through the first six months of 2015 — to up to $18 billion in federal fines if the EPA assesses the maximum possible penalty of $37,500 per vehicle.

The violations could invite charges of false marketing by regulators, a vehicle recall and payment to car owners, either voluntarily or through lawsuits. Volkswagen advertised the cars under the "Clean Diesel" moniker.

The state of California is investigating the emissions violations.

The EPA accused the German automaker of adopting what it called a "defeat device" to trick U.S. regulators into believing its cars met Clean Air Act standards for nitrogen oxides. Volkswagen admitted to investigators it had installed the defeat device, the EPA said.

Volkswagen told dealers they cannot sell the 4-cylinder diesel versions of those cars until a fix is available, Volkswagen spokesman Mario Guerreiro said Sunday.

The sales halt could put a significant dent in the company's September sales performance. About 20% of Volkswagen's vehicle sales are diesel engines, said AutoPacific analyst Dave Sullivan.

"It totally goes against all of the marketing they have had of a clean diesel," Sullivan said of the violations. "That's one of the biggest selling points for Volkswagen."

"The trust of our customers and the public is and continues to be our most important asset," Winterkorn said Sunday. "We at Volkswagen will do everything that must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused. This matter has first priority for me, personally, and for our entire Board of Management."

Chicago Tribune:

http://www.chicagotribune.com/business/ct-volkswagen-owners-0921-biz-20150921-story.html

Volkswagen owners should be nervous about emissions scandal, experts say

Becky Yerak and Gregory Karp

Volkswagen hit with class-action suit over emissions cheating.

Automobile recalls, even huge, highly publicized ones, typically don't hurt new or used car sales, but the Volkswagen scandal involving tricking emissions testers is different and could be cause for worry among VW diesel vehicle owners, experts say.

At least one class-action lawsuit has already been filed on behalf of Volkswagen and Audi owners. It claims fraud and breach of contract, citing the "diminished value" of the nearly 500,000 recalled diesel vehicles, which usually sell for a premium price over their gasoline

counterparts. Specifically, after recalled Volkswagen diesels are fixed, the cars might have degraded horsepower and fuel efficiency, the suit says.

The EPA says Volkswagen violated the federal Clean Air Act by installing "defeat devices" — software programmed to switch engines to a cleaner mode during official emissions testing. The software then switches off again, enabling cars to emit as much as 40 times the legal limit of pollutants during normal driving.

Volkswagen marketed the diesel-powered cars as being better for the environment. The affected diesel cars, according to the EPA's letter to Volkswagen on Friday, include: Jetta, 2009 to 2015; Jetta SportWagen TDI, 2009 to 2014; Beetle, 2012 to 2015; Beetle Convertible, 2013 to 2015; Audi A3, 2010 to 2015; Golf, 2010 to 2015; Golf SportWagen TDI, 2015; and Passat, 2012 to 2015.

Consumer Reports called the Volkswagen scandal "outrageous" and a violation of law.

"Volkswagen was ripping off the consumer and hurting the environment at the same time," said Ellen Bloom, senior director of federal policy for Consumers Union, the policy and advocacy arm of Consumer Reports.

The EPA has ordered VW to fix the cars at its own expense but said car owners do not need to take any immediate action. The EPA insisted that the violations do not pose any safety hazard and said cars on the road remain legal to drive. Volkswagen has ordered a stop to sales of new and used TDI cars in stock.

The EPA said, however, that the cars pose a threat to public health. The agency said the carmaker could be fined more than $18 billion.

The automaker is also part of a criminal probe by the U.S. Justice Department, unnamed sources told The Associated Press and Bloomberg News.

In the Chicago region, Volkswagen dealerships were not responding to inquiries Monday, except one that said it hadn't heard from any consumers about the issue and expressed confidence the problem would be taken care of.

For consumers, whether diesel Volkswagens from seven model years will really have less value is an open question.

During recent high-profile recalls by GM, Toyota and Honda, there has been very little, if any, impact on sales, said officials from Kelley Blue Book, Black Book and Edmunds.

"With so many recalls in the news, they easily become white noise for a lot of consumers, and they don't appear to have much of an influence on shopping decisions," according to Edmunds.com.

Even when there's intense media coverage, the impact on resale value is "fleeting," as with the Toyota recall for accelerators that would stick, said Eric Ibara, a senior analyst with Kelley Blue Book. "It lasted for maybe six or eight months, and their resale values popped back to where they normally were.

Still, the Volkswagen recall is different.

First, it doesn't involve a safety issue but more a breach of public trust. "The impact on that could be longer-lasting," Ibara said. "Our concern is their image is tarnished ... I imagine if you own a Volkswagen, you're reading the coverage of what they've done."

Indeed, when a car is recalled for a safety reason, the recall could actually improve goodwill with the customer, said Anil Goyal, vice president of Automotive Valuation and Analytics for Black Book.

Another concern for current owners is how the resale values will react when Volkswagen eventually restarts selling the diesel models now sitting idle on lots after it stopped selling. "If they show up with higher incentive levels, that certainly impacts the used-car values," Ibara said.

In other words, if VW chooses to get rid of that inventory by offering great incentives and significantly lowering diesel car prices, demand for used cars would drop along with their prices.

Volkswagen offers some of the least expensive diesel models and in recent years had been a market leader in that segment of the vehicle market, said John Voelcker, editor of GreenCarReports.com. "Diesels in this country have mostly been confined to trucks," Voelcker said. "VW was the only volume maker of diesel cars."

According to Edmunds, VW and Audi account for 17 of 44 vehicle models that offer diesel engines, or 39 percent.

Diesel vehicles fetch a premium price both in the new and used markets. The premium price paid by new-car buyers for the diesel version of the recalled cars varies from $1,000 to almost $7,000, according to list prices.

In a quick analysis by Swapalease.com, a 3-year-old base model Volkswagen Golf using gasoline sold for 51 percent of its original value, while a diesel sold for 57 percent, said Scot Hall, executive vice president of operations for Swapalease.com. "That's a significant difference," he said.

It's an open question whether the VW diesels, which have TDI as part of the name for turbocharged direct injection, will retain the premium over their gasoline counterparts, Ibara said. "It would not surprise me if they drop a little bit, but I do not expect the premium to entirely disappear."

What fix Volkswagen will employ is unclear, whether it's a software solution or some physical repair or retrofit. It may just restate the fuel economy to be lower on diesels — maybe 3 to 5 mpg — and then be faced with offering some compensation to owners, Ibara said.

So far, it's difficult to say for sure that a fix would hurt the vehicle's fuel mileage, performance or reliability. But some current owners are expecting that, Hall said.

Hall said there's talk that some Volkswagen owners would avoid the fix because they prefer more power, better performance and greater fuel economy and care less about the emissions.

Consumer Reports said that, as a result of the scandal, it has suspended its "recommended" rating of two VW vehicles, the Jetta diesel and Passat diesel, until it can retest the cars with the recall repair performed. It said it will also assess whether the repair hurts performance or fuel economy.

The potential downgrade in performance was also mentioned in the class-action lawsuit,

filed on behalf of David Fiol, a California resident and 2012 VW Jetta SportWagen TDI owner. He seeks class-action status both nationally and in California, for unspecified punitive damages and legal fees, among other things.

Fiol, in his lawsuit, mentions "future additional fuel costs" and the "diminished value" of his vehicle, despite the recall.

Volkswagen won't be able to make the vehicles "comply with emissions standards without substantially degrading their performance characteristics, including their horsepower and their efficiency," the lawsuit said. "As a result, even if Volkswagen is able to make" plaintiffs' vehicles EPA compliant, the owners "will nonetheless suffer actual harm and damages because their vehicles will no longer perform as they did when purchased and as advertised."

Volkswagen didn't immediately respond to a request for comment about the lawsuit, filed last Friday by Seattle law firm Hagens Berman Sobol Shapiro in a U.S. District Court in the Northern District of California.

In Illinois, diesel vehicles like the VWs in question don't require emissions inspections like gasoline models, so the flap won't affect owners in that way, according to a spokeswoman for the Illinois Environmental Protection Agency.

From: Gong, Kristiene
Sent: Tuesday, September 22, 2015 10:12 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

NY Times:

http://www.nytimes.com/2015/09/22/business/it-took-epa-pressure-to-get-vw-to-admit-fault.html?_r=0

It Took E.P.A. Pressure to Get VW to Admit Fault

By BILL VLASIC and AARON M. KESSLER SEPT. 21, 2015

Volkswagen executives told environmental regulators for more than a year that discrepancies between pollution tests on its diesel cars and the starkly higher levels out on the road were a technical error, not a deliberate attempt to deceive Washington officials.

But this month, the executives made a startling admission: The diesel vehicles it sold in the United States used software meant to cheat on the tests.

VW made the admission only when the Environmental Protection Agency took the extraordinary action of threatening to withhold approval for the company's 2016 Volkswagen and Audi diesel

models, according to letters sent to company officials by the E.P.A. and California regulators.

Since that deception became public on Friday, Volkswagen has scrambled to conduct damage control. The chief executive apologized and the company said it would stop selling diesel-powered cars from the 2015 and 2016 model years.

All this was possible because environmental regulators had tools and powers at their disposal that another area of enforcement — auto safety regulation — does not have, despite the efforts of lawmakers, consumer advocates and, more recently, auto safety regulators themselves. Often, the auto industry has beaten back more stringent laws.

The National Highway Traffic Safety Administration, for example, can impose a maximum penalty of $35 million on an automaker that flouts safety regulations — a relatively low sum for a company like General Motors, which last year paid such a fine for a defect that has now been linked to at least 124 deaths.

By contrast, under the Clean Air Act, Volkswagen, the world's largest automaker, could be fined as much as $37,500 for each recalled vehicle, for a possible total penalty of as much as $18 billion.

"The Clean Air Act statutory scheme gives E.P.A. more power and flexibility to move more quickly than N.H.T.S.A.," said Carl Tobias, a law professor at the University of Richmond, who has studied the government's response to auto safety issues. "E.P.A. also seems more tough-minded and savvy about how to be effective in this arena."

Still, the time it takes to investigate auto companies is often extensive, and getting the facts can be a challenge. "Even E.P.A. took a year to finally crack this case open," he said.

Beyond the E.P.A., the government has other tools at its disposal when it comes to enforcing environmental regulation.

As G.M. did, Volkswagen now faces a criminal investigation by the Justice Department, according to a person briefed on the inquiry. It is being conducted, though, by the department's Environment and Natural Resources Division, which is devoted to violations of environmental law. "Nearly one-half of the division's lawyers bring cases against those who violate the nation's civil and criminal pollution-control laws," the department's website says.

And on Monday, a subcommittee of the House Energy and Commerce Committee said it would hold a hearing on the issue.

It's only part of the pressure being applied to Volkswagen. An official with the Environmental Protection Agency said that discussions are continuing with Volkswagen, as the company grapples with how to handle a recall of the affected vehicles.

"We still have many questions for the company," said Christopher Grundler, head of the agency's transportation office. "It's the responsibility of Volkswagen and Audi to prepare a remedy for these vehicles."

There is no timetable for Volkswagen to submit a comprehensive plan to recall and fix the affected vehicles. But government officials are urging the company to take action quickly — both on developing a fix for the cars and starting a campaign to educate consumers on the problem.

"This does not happen immediately," Mr. Grundler said. "And we've been trying to be clear with the consumers that their vehicles are safe and they don't have to do anything right now." The assessment of fines for the violations will also not happen immediately. "That is down the road," he said.

"But we feel a sense of urgency to address the emissions of these vehicles that are already on the road."

A Volkswagen spokesman, John Schilling, said the automaker was "committed to fixing this

issue as soon as possible" and to developing "a remedy that meets emissions standards and satisfies our loyal and valued customers."

Even with the looming punishment, the company almost got away with it. In fact, it most likely would have if not for a strange twist of fate and the curiosity of several auto researchers.

Two years ago, the International Council on Clean Transportation, a nonprofit environmental group staffed by a number of former E.P.A. officials, had been testing the real-world performance of so-called clean diesel cars in Europe, and were less than impressed with the emissions results.

The group decided it would test diesel-powered cars in the United States, where regulations were much more strict, as a way of almost shaming the European automakers to tighten their compliance. The group fully expected the American cars to do well, and run cleaner than their counterparts across the pond.

What they could not have foreseen was that they would stumble onto one of the biggest frauds in recent automotive history.

Further, on the campus of West Virginia University, a group of emissions researchers who mainly dealt with heavy trucks noticed an unusual posting by the transportation council, which was looking for a partner to test diesel-powered cars.

"No one had done that before in the U.S.," said Arvind Thiruvengadam, a professor at the university. "It sounded very interesting, to test light-duty diesel vehicles in real-world conditions. We looked around at each other said, 'Let's do it.' "

The university's team bid on the project and got the contract. Mr. Thiruvengadam and his colleagues never envisioned where it would lead. "We certainly didn't have an aim of catching a manufacturer cheating," he said. "It didn't even cross our minds."

The study also did not target Volkswagen specifically. It was something of a fluke, he said, that two out of three diesel vehicles bought for the testing were VWs.

It did not take long for suspicions to set in. The West Virginia researchers were well-versed in diesel performance on real roads, and had certain expectations for how the test cars should ebb and flow in their emissions. But the two Volkswagens behaved strangely.

"If you're idling in traffic for three hours in L.A. traffic, we know a car is not in its sweet spot for good emissions results," Mr. Thiruvengadam said. "But when you're going at highway speed at 70 miles an hour, everything should really work properly. The emissions should come down. But the Volkswagens didn't come down."

Even then, however, it is difficult for most researchers to be sure exactly what is going on. There are so many factors involved in real-world driving — speed, temperature, topography, braking habits. It is not unheard-of for cars to perform much differently in on-the-road tests than one expected.

But this time there was a key difference: The California Air Resources Board heard about the groups' tests and signed on to participate. The regulators tested the same vehicles in their specially equipped lab used to judge cars' compliance with state emissions standards. That gave the project what most studies lacked: a baseline.

"That broke loose everything," Mr. Thiruvengadam said.

In the lab, the two VWs performed flawlessly. But when they were taken out on the roads in California, they were belching out levels of nitrogen oxide that were 30 to 40 times higher than the regulatory standards. Even the heavy-duty trucks the researchers had tested had never performed that poorly by comparison.

"It just didn't make sense," said John German, one of the leaders on the project at the transportation council. "That was the real red flag for us."

Forbes:

http://www.forbes.com/sites/maggiemcgrath/2015/09/22/goldman-chief-lloyd-blankfein-discloses-highly-curable-cancer/

Volkswagen Credit Spreads Soar After EPA Charges Co. With Evading Pollution Controls

John Atkins, CONTRIBUTOR

Credit spreads referencing German automaker Volkswagen widened sharply today after the U.S. Environmental Protection Agency on Friday charged the company with evading government pollution controls through software designed to allow diesel models to meet clean-air standards, but only during official emissions testing. The government demand for recalls affects roughly 500,000 vehicles.

Volkswagen five-year CDS costs increased 80% today, rising 60 bps to the 135 bps area, or a high since 2012, trade data show. The 2.45% notes due Nov. 20, 2019 issued by subsidiary Volkswagen Group of America Finance last November, at T+85, changed hands today as much as 77 bps wider on the session, reaching at G-spread equivalents as wide as T+180, according to MarketAxess.

Credit analysts today noted the significant potential risks to VW's credit standing and reputation. "VW's operating margins have lagged peers (BMW, Daimler) for some time, and the automaker has cited encouraging U.S. vehicle sales in the context of its 2015 revenue and profit outlook," stated FTN Financial senior credit strategist Benjamin Millard in a credit note.

While it acknowledged uncertainties regarding the impact of the scandal on Volkswagen's brand image and reputation – and terming the development a "crisis" for VW – Fitch today said the scandal is unlikely to trigger an immediate downgrade of Volkswagen's A rating, even though Volkswagen reportedly faces a maximum penalty of $18 billion as well as any costs related to a recall effort.

"We believe the fine is unlikely to amount to the theoretical maximum amount of USD37,500 per car, although there have been only very few precedents of such cases and associated fines. In addition, the group's financial structure is sound and its free cash flow (FCF) generation extremely robust," Fitch stated today.

The outlooks on the respective A/A2 ratings at S&P and Moody's are currently stable, through S&P warned as recently as Sept. 7 that stricter carbon rules were fueling high capital spending demands on Europe's carmakers.

TIME:

http://time.com/money/4042745/volkswagen-epa-diesel-scandal/

The Volkswagen Diesel Emissions Scandal, By the Numbers

Ethan Wolff-Mann @ewolffmann Sept. 21, 2015

VW is accused of faking pollution tests on a grand scale.

Last week, the EPA accused Volkswagen of deliberately falsifying tests of its diesel engine cars so that the vehicles would pass anti-pollution standards. A massive recall of nearly half a million Volkswagen diesel cars was ordered, causing a major stir in the industry—and especially among VW owners who had been drawn to the vehicles because of the automaker's "clean diesel" claims.

Let's look at the situation by the numbers.

482,000 Diesel cars affected, which include TDI Jettas, Beetles, Golfs, and Audi A3s from 2009-15 and Passats from 2014-15.

$37,500 Fine per vehicle that the German automaker could face in the U.S.

$18 billion Possible total penalties faced by Volkswagen, and that figure doesn't include fixing the recalled cars.

40 Times over the legal limit of certain types of pollution emitted by the vehicles, including nitrogen oxide—which can cause respiratory problems.

$6,855 Premium that buyers were paying for Passat TDI cars over standard gasoline versions.

-20% The hit Volkswagen stock has taken since the scandal.

12 Number of months Volkswagen has been denying cheating on the emissions test.

2017 When Volkswagen may sell diesel cars again in the U.S., now that sales have been halted.

2.0 Liter 4-cylinder engines affected. Larger diesel engines used in SUVs don't have the software at the center of the controversy.

$0 Current resale value of affected cars in California, because the cars were sold as "non-compliant" (and therefore cannot be resold).

14.28% Of affected cars that are registered in California

23 Percentage of Volkwagens sold in August that were diesels.

-

Automotive News:

http://www.autonews.com/article/20150921/OEM11/150929980/vws-diesel-sales-frozen-until-compliance-is-proven-epa-official-says

VW's diesel sales frozen until compliance is proven, EPA official says

Fix must be approved before recall can begin

Chris Grundler: "It will take more work to determine what the appropriate remedy for these vehicles is."

By Ryan Beene

WASHINGTON -- With its diesel car lineup grounded by an emissions-test cheating scandal, Volkswagen now bears the burden of proving that these vehicles comply with federal emissions standards, the EPA's top auto regulator said.

Until then, said Chris Grundler, director of the EPA's Office of Transportation Air Quality, no sales.

Meanwhile, Grundler said, the EPA and California regulators are now probing all light-duty diesel vehicles in the U.S. market from all manufacturers to check for illegal software designed to fool U.S. emissions tests.

U.S. regulators accused VW on Friday of violating the Clean Air Act by selling 482,000 diesel-powered vehicles with such illegal software. The agency said the company admitted to fitting

seven model years' worth of diesel cars with the softwared -- termed a "defeat device" -- that would activate the cars' emission controls during testing, but deactivate them in real-world driving.

In order to be able to resume sales of diesels, Grundler said, VW has to engineer a fix to bring those vehicles into compliance, and receive EPA approval before a recall can commence. It's not clear yet whether that fix will consist of a change to the engine's emission control software or more substantial engineering changes to vehicle hardware, Grundler said.

According to the EPA's website, it could take up to one year to identify "corrective actions," develop a recall plan and issue recall notices. But Grundler declined to discuss a specific timetable.

"Until we gather that information and are convinced ... we're not going to go forward with the recall," Grundler said. "It will take more work to determine what the appropriate remedy for these vehicles is."

Capitol Hill

U.S. lawmakers want more answers, too.

Republican leaders of the House Energy and Commerce Committee today announced plans to hold a hearing on the VW emissions scandal in the near future. The hearing will be held before the panel's Oversight and Investigations Subcommittee, though no date has been set.

"We will follow the facts. We are also concerned that auto consumers may have been deceived – that what they were purchasing did not come as advertised," U.S. Reps. Fred Upton, R-Mich., and chairman of the Energy and Commerce Committee and Tim Murphy, R-Pa., chairman of the investigations subcommittee, said in a joint statement.

"The American people deserve answers and assurances that this will not happen again. We intend to get those answers."

Also in Washington, the White House said today it was "quite concerned" about reports it was seeing concerning VW's conduct in complying with U.S. Clean Air Act requirements.

"It's fair to say that we're quite concerned by some of the reports that we've seen about the conduct of this particular company, but ultimately this is the responsibility of the EPA to take a look at it and that's exactly what they're doing," said White House spokesman Josh Earnest.

California questions

VW will also have to convince the EPA and California's Air Resources Board that its 2016 model year diesel vehicles will comply with emissions standards and are free of any illegal software, Grundler said. Until then, the agency will continue to withhold the emission certifications needed to begin sales of those models, which are currently being withheld from dealers.

The sales suspensions are a blow to Volkswagen, which counts on diesels for more than one-fifth of the VW brand's sales volume, and has touted its "clean diesel" technology as a key differentiator in the marketplace.

"We've been working with the company for a long time trying to get answers and it wasn't until very recently that VW admitted that these vehicles contained software designed to defeat the emissions standards," Grundler said. "We want to make sure that 2016 model vehicles don't operate the same way."

Popular Mechanics:

http://www.popularmechanics.com/cars/a17430/ezra-dyer-volkswagen-diesel-controversy/

This VW Diesel Scandal Is Much Worse Than a Recall

This isn't cost-cutting. This is outright cynical deceit.

By Ezra Dyer

Most of the time, media test cars are distinguished only by a license plate that might bear a discreet "manufacturer" tag. Audi diesels, though, are a different matter. Whether a Q7 or an A3, the diesel press cars from Audi (which is part of the Volkswagen group) always bear towering "TDI Clean Diesel" decals across their flanks. I guess the theory is that when the cars are out on the road they're serving double duty as billboards, spreading the gospel about the Volkswagen group's engineering prowess.

A few years ago I bought a nasty Ford F350 diesel for an engine swap, and I parked it next to an Audi A3 and took a few shots to capture the juxtaposition: truck from the dirty diesel past, Audi harkening to the clean-burning future. That certainly looks ironic today.

If you're not up to speed on Volkswagen's shenanigans, you can catch up here. Suffice to say that it seems the A3's sanctimonious TDI Clean Diesel stickers were relevant only when the cars were actually undergoing an EPA emissions test. Out in the real world, 2.0-liter Volkswagens and Audis were as much as 40 times above the legal emissions limit for nitrogen oxides (NOx). According to the EPA, about 482,000 four-cylinder Volkswagens and Audis built since 2009 included what the agency defines as a "defeat device," which is really just software that detects an emissions test and "turns full emissions controls on only during the test." The cheater software was discovered by researchers at West Virginia University who were trying to document the cleanliness of modern diesels. Volkswagen surely wishes they hadn't bothered.

The revelation of this emissions subterfuge answers at least two questions about VW's mighty little diesel. The first concerns urea injection, which every other modern diesel uses to pass emissions tests. The urea-injection systems help to neutralize NOx emissions, but they also add weight and cost to the car, and saddle car buyers with yet another tank of liquid that must be monitored. If you run out of this diesel exhaust fluid, it's like running out of fuel—on trucks with such systems, running dry on urea triggers a severe limp-home mode with a 5 mph speed limiter. That's how seriously the EPA takes NOx.

Everyone wondered how VW met emissions standards while foregoing urea injection. As it turns out, they didn't. It wasn't magical German engineering. Just plain old fraud.

The second question concerned fuel economy. It's been widely noted that four-cylinder TDIs tend to smash their EPA fuel economy estimates in real-world driving. The last TDI Jetta SportWagen I drove was rated at 42 mpg highway, but on 60-mph two-lane roads I averaged more like 50 mpg. That's a huge difference. Did running non-compliant emissions improve fuel economy? That's possible. And if so, that raises an interesting question: When the cheater VWs emitted too much NOx, were they also emitting a lot less CO2 thanks to improved economy? Maybe the good doesn't offset the bad, but it's something to consider. You can bet that VW's lawyers will.

THE INTENTIONALITY BEHIND THE DECEIT MAKES THIS SITUATION DIFFERENT FROM EVEN A HUGE-SCALE RECALL.

So, how is Volkswagen going to fix this? Putting aside the inevitable fines, possible criminal charges, and massive public disgrace, there are half a million cars running an emissions setup that never should've left the factory. And there's no quick fix to make up for VW's lies.

All the other carmakers control diesel emissions by spraying a urea solution into the exhaust stream, where a catalyst converts it to ammonia. The ammonia breaks down NOx into nitrogen and water. If all of that sounds like it would be tough to bolt right in, you're correct. Maybe VW can meet the standards without adding equipment—say, by tweaking the engine control unit (ECU) with a different tuning. But what if that new tuning meets the emissions standards but sacrifices performance or fuel economy? Now you've got 482,000 customers on a class action lawsuit.

There's no easy way out of this, but they'd better figure something out, and pronto. Right now dealers are banned from selling 2.0-liter TDIs, which make up about a quarter of VW's U.S. sales. News of the scandal caused VW to lose about a quarter of its market value, indicating that investors understand how bad this is. There's no cheap fix nor easy settlement here.

The intentionality behind the deceit makes this situation different from even a huge-scale recall. This isn't a story about a part that was made one cent cheaper than it should've been, where a car company cut a corner to save a little cash. It's about a huge corporation eying the rulebook and deciding there's a competitive advantage in violating the Clean Air Act. Incompetence is one thing, but calculated mendacity is quite another.

It's too bad. That Golf SportWagen TDI is a punchy, fun car. It's got great fuel economy, tons of torque and a bargain price. But when something seems a little too good to be true, maybe that's because it is.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 4:33 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Chicago Tribune:

http://www.chicagotribune.com/business/columnists/ct-rosenthal-vw-emissions-0922-biz-20150921-column.html

VW comes clean on dark heart of its diesel cars. Can it clear the air?

Phil Rosenthal

Seems VW fought diesel wars with smoke and mirrors, mostly smoke. What the fahrvergnügen?!

Volkswagen called it clean diesel. Clean like Lance Armstrong. Clean like the Chicago River.

Seriously, what the fahrvergnügen?!

VW has admitted to the Environmental Protection Agency that hundreds of thousands of its diesel cars have been using what is literally a killer app.

The software allowed the vehicles to sail through U.S. emissions tests while reportedly spewing

10 to 40 times the level of certain pollutants as allowed in ordinary use.

It's been smoke and mirrors — mostly smoke — for the last seven model years.

We're talking about 2009, 2010, 2011, 2012, 2013, 2014 and 2015 VW Golfs, Jettas and Beetles, along with Audi A3s, equipped four-cylinder, 2.0-liter turbodiesel engines. Oh, almost forgot the 2012-15 Passats.

That's nearly half-a-million vehicles in all, belching nitrogen oxide to preserve mileage ratings and performance no other carmaker could seem to match, thanks to emissions control systems programmed to operate only when testing protocols were detected.

So we get more smog and ozone and poisons tied to a litany of health problems, such as asthma attacks and other respiratory diseases, along with premature death. VW gets more car sales.

Score one for German engineering and systematic subterfuge, trading our health for its profits.

Apparently the EPA was first tipped to VW's plot when discrepancies showed up in independent testing. But it seems like precisely the sort of thing James Bond is told of when strapped to a nuclear missile about to launch.

The word diabolical comes to mind.

So does evil.

One pictures even C. Montgomery Burns, king of the corner-cutters on "The Simpsons," looking askance. And we don't know yet if VW is the only offender.

The auto industry isn't overburdened by high expectations, particularly in the last 12 months or so.

General Motors last week agreed to a $900 million settlement to end a criminal investigation into its failure to disclose a deadly ignition defect.

Toyota last year agreed to a $1.2 billion penalty for withholding information about its vehicles' unintended acceleration linked to other fatalities.

Takata, it's been revealed, knew of dangerous, potentially fatal defects in its airbags long before alerting federal regulators, leading to the recall of millions of Honda, Toyota, Chrysler, Subaru, GM, Mitsubishi, BMW, Mazda, Nissan and Ford vehicles.

Yet, as Automotive News noted, "Compared with other run-ins between the EPA and automakers, VW's alleged violation stands out in its brazenness."

This takes that kind of amoral corporate behavior to a whole other threat level.

VW didn't just conceal something it discovered endangering people. It created technology for the specific purpose of allowing it to benefit from endangering people.

Even if you're one of those people who somehow isn't a fan of clean-air standards, it's not a political statement to press on and try to throw authorities off the trail. It's just a crime.

Tampering with emissions control systems, under terms of the Clean Air Act, could mean a fine for VW as high as $37,500 per vehicle or roughly $18 billion, though you know what happens when you start to haggle with car guys.

But even if VW is fined and there's a mandatory recall, some drivers will be reluctant to embrace the fix because it likely will make the vehicle less effective and efficient than the one they thought they bought.

Funny we never caught wind of any of this in those slightly discomfiting VW commercials with the old ladies hitting on a salesman. Least we don't remember any mention of it.

VW pulled the ads off the air and, to the extent it could, off YouTube as word of its scandal came out, yet more proof that a carmaker can indeed move fast to protect something it actually cares about — like its bottom and bottom line.

This isn't the Olympics. It's one thing to try to keep test results from showing banned substances in one's own body, quite another to try to mask bad stuff being inflicted on others.

Cough.

This goes beyond the venality of one corporation to whether there's any confidence left in diesel cars and credibility in the entire auto industry. Even if this is as far as it goes, it will take quite a while to clear the air.

VW recently surpassed Toyota to become the world's largest carmaker, an achievement now eclipsed by the suspicion that there is nothing it wouldn't do.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 4:13 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Bloomberg (via Australian Financial Review):

http://www.afr.com/news/world/volkswagen-faces-us-criminal-probe-on-emissions-20150921-gjrtss

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Volkswagen faces US criminal probe on emissions

The US Justice Department is conducting a criminal investigation of Volkswagen's admission to cheating on federal air pollution tests, according to two US officials familiar with the inquiry.

Volkswagen said last week it's cooperating with regulators probing gaps between emissions on the road and lab tests on some diesel models, affecting more than half a million cars. The US officials described the inquiry on condition of anonymity because it's a continuing investigation.

The Wolfsburg, Germany-based automaker plunged as much as 23 per cent Monday to 125.40 euros in Frankfurt, wiping out about 15.6 billion euros ($US17.6 billion) in market value. The stock closed at 132.2 euros, its lowest in more than three years.

Volkswagen's admission is putting pressure on Chief Executive Officer Martin Winterkorn to repair the reputation of the world's biggest carmaker. Winterkorn, whose contract renewal is scheduled for a supervisory board vote on Friday, now faces a serious challenge to his leadership, said Arndt Ellinghorst, a London-based analyst for Evercore ISI.

"This latest saga may help catalyze further management changes at VW," Ellinghorst wrote in a note Monday.

Justice Department spokesman Wyn Hornbuckle declined to comment.

Criminal inquiries can take months or years and lead to charges against individuals and companies. They can also result in fines and deferred-prosecution agreements, such as the one recently struck with General Motors Co., to spur companies into improving their behaviour and addressing problems revealed during the investigations.

Volkswagen admitted on September 18 to fitting some of its US diesel vehicles with software that turns on full pollution controls only when the car is undergoing official emissions testing, the Environmental Protection Agency said Friday. Affected are diesel versions of the VW Jetta, Golf, Beetle and Passat and the Audi A3.

During normal driving, the cars with the software -- known as a "defeat device" -- would pollute 10 times to 40 times the legal limits, the EPA estimated. The discrepancy emerged after the International Council on Clean Transportation commissioned real-world emissions tests of diesel vehicles including a Jetta and Passat, then compared them to lab results.

VW said it's cooperating with regulators probing gaps between emissions on the road and lab tests on some diesel models. According to the EPA, the company insisted for a year that discrepancies were mere technical glitches.

Winterkorn, who has led VW since 2007, was forced to halt sales of the cars on Sunday and issue a public apology, saying he's "deeply sorry" for breaking the public's trust and that VW would do "everything necessary in order to reverse the damage this has caused."

The violations could result in as much as $US18 billion in fines, based on the cost per violation and the number of cars.

The US accusations are "grave" and must be clarified swiftly, said Stephan Weil, prime minister of the German state of Lower Saxony, which owns 20 percent of Volkswagen's voting shares. "Possible consequences can be decided after that."

The European Commission also said it's taking VW's cheating seriously and is in contact with US regulators and the company about details of the case.

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The Guardian:

http://www.theguardian.com/business/2015/sep/21/volkswagen-emissions-scandal-sends-shares-in-global-carmakers-reeling

Volkswagen emissions scandal could snare other companies, whistleblower claims

Billions wiped off value of industry heavyweights amid concerns that manipulation of air pollution data could be 'very widespread'

Joanna Walters Graham Ruddick and Sean Farrell

The emissions-fixing scandal that has engulfed Volkswagen in the US could extend to other companies and countries, one of the officials involved in uncovering the alleged behavior told the Guardian on Monday.

Billions of pounds have been wiped off the value of global carmakers amid growing concerns that emissions tests may have been rigged across the industry.

"We need to ask the question, is this happening in other countries and is this happening at other manufacturers? Some part of our reaction is not even understanding what has happened exactly," said John German, one of the two co-leads on the US team of the International Council for Clean Transportation (ICCT), the European-based NGO that raised the alarm.

Shares in Volkswagen fell by almost a fifth after the world's second biggest carmaker issued a public apology in response to US allegations that it used a "defeat device" to falsify emissions data.

The US Justice Department is conducting a criminal investigation of Volkswagen admission,

according to Bloomberg, which cited two officials familiar with the inquiry.

The company could face a fine of up to $18bn (£11.6bn), criminal charges for its executives, and legal action from customer and shareholders. The US law firm Hagens Berman has already launched a class-action law suit on behalf of customers who bought the affected cars.

VW shares fell by 19% in Frankfurt, wiping almost €15bn (£10.8bn) off its value. Shares in Renault, Volkswagen's French rival, also dropped by 4%, while Peugeot was down 2.5%, Nissan 2.5% and BMW 1.5% amid concerns they could be caught up in investigations.

The US Environmental Protection Agency said on Friday that VW had installed illegal software to cheat emission tests, allowing its diesel cars to produce up to 40 times more pollution than allowed. The US government ordered VW to recall 482,000 VW and Audi cars produced since 2009.

In response, Martin Winterkorn, chief executive of VW, said on Sunday he was "deeply sorry" for breaking the trust of the public and ordered an external investigation.

German tipped off regulators at the California Air Resources Board (Carb) and the US Environmental Protection Agency (EPA) after conducting tests that showed major discrepancies in the amount of toxic emissions some VW cars were pumping out compared with the legal limits.

Max Warburton, an analyst at the financial research group Bernstein, said: "There is no way to put an optimistic spin on this – this is really serious."

A British expert in low-emission vehicles claimed the manipulation of air pollution data could be "very widespread" and that tests in Europe are "much more open to this sort of abuse".

Greg Archer, a former government adviser and head of clean vehicles at the respected Transport

& Environment thinktank, said: "I am not surprised. There has been a lot of anecdotal evidence about carmakers using these 'defeat devices'. All credit to the US's EPA for investigating and finding the truth."

Archer, the former managing director of the UK's Low Carbon Vehicle Partnership and non-executive director for the government's Renewable Fuels Agency, said the scandal could spread into petrol cars and CO2 levels. "It is probably not limited to diesel and not limited to emissions," he added.

The "defeat devices" are thought to work by injecting more urea – an exhaust fluid – into the car when it is being tested. This limits nitrogen oxide emissions. The car detects it is being tested because devices such as the anti-collision systems have to be turned off when it is in the laboratory. The extra urea is not injected into the car when it is on the road because it would quickly run out.

Archer claims European tests are more open to abuse because they are conducted before the car goes into mass production and by companies that have been paid by the carmakers. These testing companies have been verified by regulators in each country, such as the Vehicle Certification Agency, but in the US the tests are conducted by an independent body.

Industry leaders in Britain claimed there was "no evidence" that manufacturers are cheating the system in Europe but admitted it needs to be reformed.

Mike Hawes, chief executive of the Society of Motor Manufacturers and Traders, the industry trade body, said: "The EU operates a fundamentally different system to the US – with all European tests performed in strict conditions as required by EU law and witnessed by a government-appointed independent approval agency. There is no evidence that manufacturers cheat the cycle.

"The industry acknowledges, however, that the current test method is outdated and is seeking agreement from the European Commission for a new emissions test that embraces new testing technologies and is more representative of on-road conditions."

The US allegations involve a series of diesel cars produced by VW and the brands it owns, such as Audi. These include the Audi A3, VW Jetta, Beetle, Golf and Passat models. VW has halted sales of these models.

Jochen Flasbarth, a senior environment official in the German government, accused Volkswagen of "blatant consumer deception" over the scandal. The country's economy minister, Sigmar Gabriel, also warned it could damage the reputation of the country's vital automotive industry.

"That this is a bad case, I think is clear," Gabriel said. "You will understand that we are worried that the justifiably excellent reputation of the German car industry and in particular that of Volkswagen suffers." The German government has launched its own investigation into VW and held talks with executives.

The scandal puts the future of Volkswagen chief Winterkorn in serious doubt. Earlier this year he won an internal power struggle with Ferdinand Piëch, who stepped down as chairman. The board of the company is due to meet on Friday to discuss extending Winterkorn's contract.

Winterkorn has been at the helm of VW since 2007 and has been directly responsible for research and development since then.

Guido Reinking, a German automotive analyst, told German television station n-tv: "It's almost impossible to imagine that he didn't know about this special way of programming the engine."

David Bailey, professor of industrial strategy at Aston University in Birmingham, said: "If it is the case that they have been trying to hoodwink regulators, it's a really dumb thing to do. Regulators will look at this more closely now. There has been growing concern about diesel cars and nitrous oxide emissions. The industry has been trying to make the case that the latest regulations largely deal with that issue but regulators will now look more closely at whether they have."

In the wake of the scandal two senior VW executives cancelled a planned appearance at a media

event in New York with rock star Lenny Kravitz scheduled for Monday evening.

Herbert Diess, chairman of the VW brand's management board, and Heinz-Jakob Neusser, VW's board member in charge of technical development, had planned to attend the event to introduce the latest version of the Passat mid-size sedan.

The chief executive of VW's US arm, Michael Horn, was still due to attend the event. He is expected to provide a statement about the situation.

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Jalopnik:

http://jalopnik.com/volkswagen-is-now-the-target-of-a-criminal-investigatio-1732130214

Volkswagen Is Now The Target Of A Criminal Investigation: Report

Michael Ballaban

In a move that seemed like an inevitability at this point, the United States Department of Justice is said to have opened a criminal investigation into Volkswagen's admission to cheating on diesel emissions tests, a report from Bloomberg said.

While we had heard rumblings of a possible criminal probe earlier, this news appears to confirm that VW is in fact the subject of an investigation that could lead to prosecutions.

It's way too early to tell whether or not any individuals will personally be held criminally liable for the company's deceptions, but it's not out of the realm of possibility. We haven't seen a case in a long time where a company has admitted intentionally circumventing the law, rather than just a plea of massive institutional incompetence, so it's anyone's guess as to what will happen.

The U.S. Environmental Protection Agency has said that the company can be held responsible

for up to $18 billion in fines.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 4:02 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Business Insider:

http://www.businessinsider.com/the-us-government-is-launching-a-criminal-investigation-into-vws-falsified-emissions-figures-2015-9

The US government is launching a criminal investigation into VW's falsified emissions figures

Benjamin Zhang

The US Department of Justice has launched a criminal probe into Volkswagen's falsification of emissions data, Bloomberg news is reporting.

Last week, the Environmental Protection Agency accused the automaker of falsifying the data using secret software in nearly 500,000 cars.

According to Bloomberg's Del Quentin Wilber, two government officials close to the situation say the Justice Department is conducting a criminal investigation into the allegations.

Last week, the EPA accused VW of using the hidden software — called a "defeat device" — to dodge clean-air standard during emissions testing.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," assistant administrator for the Office of Enforcement and Compliance Assurance Cynthia Giles said in a statement on Friday.

“Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters.”

The EPA alleges that VW installed software that detects when the car is undergoing emissions testing, at which point the software would turn on all of the car's emissions control systems. But the EPA claims that the software greatly reduces the cars' pollution-control systems during normal driving conditions.

"This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," the EPA said in a statement.

Across the Atlantic, the German government is also taking a look at Volkswagen's emissions data. A spokesperson for the country's Motor Vehicle Agency told the Wall Street Journal that is has asked automakers to provide accurate emissions information to "determine whether similar instances of manipulation have taken place in Germany or Europe," However, there is no word of any official investigation on the part of the German government.

Over the weekend, VW CEO Martin Winterkorn issued the following statement:

The U.S. Environmental Protection Agency and the California Air Resources Board (EPA and CARB) revealed their findings that while testing diesel cars of the Volkswagen Group they have detected manipulations that violate American environmental standards.

The Board of Management at Volkswagen AG takes these findings very seriously. I personally am deeply sorry that we have broken the trust of our customers and the public. We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case. Volkswagen has ordered an external investigation of this matter.

The recall affects 482,000 diesel-powered cars sold in the US since 2008. They include:

Volkswagen Jetta TDI: 2009-20015

Volkswagen Beetle TDI: 2009-2015

Audi A3 TDI: 2009-2015

Volkswagen Golf TDI: 2009-2015

Volkswagen Passat TDI: 2014-2015

We have reached out to Volkswagen and the DOJ for comment. We will update when when we hear back.

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Fortune:

http://fortune.com/2015/09/21/volkswagen-emissions-recall-scandal/

Dear Volkswagen: Exaggeration? Not so bad. Deception? Never okay

by Jennifer Reingold @jennrein SEPTEMBER 21, 2015, 3:44 PM EDT

One wonders what would have happened had Volkswagen opted for exaggerating its results rather than falsifying them.

The business world—and the journalists who cover it—have always rewarded a healthy bit of hype. Best Ever! New and Improved! Now with enhanced whatevers!

Actually, the love of the big claim goes far beyond the business world and is interwoven throughout society. Donald Trump's current popularity is only the latest example of bombast, er, trumping reality.

But we do have limits, as the scandal at Volkswagen shows. So far, the company's stock price has fallen almost 20% since it admitted on September 18 that it had installed software that allowed its cars to fake their performance on emissions testing in order to fool the EPA.

No one knows what will happen to the $221 billion in sales car company—the world's largest—going forward, and whether the deception stretches all the way to the CEO, Martin Winterkorn. But one wonders what would have happened had the company opted for exaggerating its results rather than falsifying them.

Don't get me wrong: I'm not advocating that any performance standards—particularly those that affect safety and health—should ever be presented with anything but the full truth. But this move was so brazen, so breathtakingly full of chutzpah, that it is hard to imagine VW's brand recovering for a very, very long time; nor, one imagines, will its culture.

The plot goes far beyond one or two people hiding out in a cubicle and must have involved hundreds of people building such a system and making sure it was implemented inside of 428,000 cars. One wonders what the company might have been able to accomplish instead if it put all that brainpower toward meeting emissions requirements rather than circumventing them.

Consider the alternative: VW tried—and failed—to meet the EPA's emissions standards, after saying that they believed they had diesel engines that did the job. The EPA (which, it's worth noting, relies primarily on self-tested data) would have—hopefully—tested its engines, found Volkswagen deficient, and fined the company. It would have been costly, yes, but it wouldn't have been all that surprising. And VW's credibility wouldn't have been destroyed in the process. After all, exaggeration, for better or worse, is just how the game is played.

MarketWatch:

http://www.marketwatch.com/story/white-house-quite-concerned-about-volkswagen-emissions-charges-2015-09-21

White House 'quite concerned' about Volkswagen emissions charges

'Quite concerned': How White House press secretary Josh Earnest characterized Obama administration reaction to the allegations against Volkswagen.

By ROBERT SCHROEDER

The Obama administration is "quite concerned" over allegations that Volkswagen cheated on U.S. emissions tests, a White House spokesman said Monday, but added it is up to the Environmental Protection Agency to investigate the matter.

"I think it's fair to say that we're quite concerned by some of the reports that we've seen about the conduct of this particular company," spokesman Josh Earnest told reporters at a regular briefing.

On Friday, the Environmental Protection Agency and the California Air Resources Board alleged that Volkswagen VLKAY, -17.38% VOW3, -18.19% used software in cars to make diesel-powered engines appear to have lower levels of emissions than they actually did. The company halted U.S. sales of some diesel-powered cars.

Earnest said it is ultimately the responsibility of the EPA to look at the issue, "and that's exactly what they're doing."

Reaction from Congress was minimal — though that could change.

"VW should expect scrutiny from Congress, legal problems, a potential multibillion-dollar fine and a batch of uncomfortable headlines," wrote Forbes contributor Micheline Maynard on Monday.

"If Volkswagen willfully sought to evade the Clean Air Act and fraudulently sold cars to millions of consumers with this technology, EPA should pursue the most severe action possible to deter others from doing the same," Rep. Frank Pallone, a New Jersey Democrat, said on Friday.

"We must ensure that this does not happen again and that consumers can trust the products that they buy," said Pallone, the top Democrat on the House Energy and Commerce Committee. The panel's oversight and investigations subcommittee held one of the several hearings into the General Motors GM, +0.43% ignition-switch recall in April 2014.

The allegations reportedly include Volkswagen Passats made at the company's Chattanooga, Tenn., facility in 2014 and 2015. A Volkswagen spokesperson did not immediately return a request for comment.

MarketWatch reached out to members of Tennessee's congressional delegation, but none offered any comment.

The 1,400-acre Chattanooga plant has more than 3,200 Volkswagen employees, the company says.

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Sent: Monday, September 21, 2015 3:39 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Vox:

http://www.vox.com/2015/9/21/9365667/volkswagen-clean-diesel-recall-passenger-cars

Volkswagen's appalling clean diesel scandal, explained

Brad Plumer

It sounds like the sinister plot of some straight-to-DVD movie. Since 2009, Volkswagen had been installing elaborate software in 482,000 "clean diesel" vehicles sold in the US, so that the cars' pollution controls only worked when being tested by regulators. The rest of the time, the vehicles could freely spew hazardous, smog-forming nitrogen oxides.

Suffice to say, regulators were livid once they caught on. On Friday, the Environmental Protection Agency announced that Volkswagen had very flagrantly violated the Clean Air Act. Not only did the EPA order the German company to fix the affected vehicles,** but the agency has the authority to levy fines as high as $37,500 per car, a maximum of $18 billion. (To put that in perspective, the company's pretax net income was about $4.7 billion last year.) The US government is also mulling criminal charges.

Volkswagen, in other words, is in deep shit. The company's CEO, Martin Winterkorn, is now apologizing profusely and pledging an external probe to find out what happened. VW just halted US sales of its 2015 and 2016 clean diesel vehicles, including Passat, Jetta, Golf, and Beetle models. Meanwhile, VW's stock price plummeted on Monday morning, the company losing nearly one-fifth its market cap in a blink:

This scandal raises a few larger questions, though: Why did Volkswagen cheat in the first place? And why was it so easy for the company to evade regulators for years? To get a better handle on the story, we need to take a brief trip through the tangled history of clean diesel vehicles — the specific cars that VW was selling.

Clean diesel cars were supposed to offer great mileage and low pollution — a tricky task

One basic fact to understand here is that there are two main types of combustion engines widely available today: diesel and gasoline. And there are real trade-offs to each.

Diesel engines have long been popular in Europe, and one of their major advantages is fuel economy. Diesel fuel contains more energy per gallon than gasoline, and the diesel engines themselves are more efficient. Put it together, and the typical diesel car can travel up to 30 percent farther on a gallon of fuel than its gasoline counterpart.

But there's a catch. While diesel cars get better mileage and emit fewer carbon-dioxide emissions, they also emit more nitrogen oxides (NOx), which help form smog, and particulate matter, which can damage lungs. Both types of pollution can have serious health effects.

Historically, Europe has dealt with this trade-off by imposing looser emissions standards on diesel cars in order to pursue higher fuel economy. That's one reason European cities like Athens have a serious smog problem. In the United States, by contrast, we've imposed much stricter rules around smog and other conventional pollutants since the 1970s, one reason diesel cars haven't caught on as widely here. (Heavy trucks favor diesel engines, though.)

In recent years, however, things have shifted. The Obama administration has been ratcheting up fuel-economy standards in the United States, which puts a higher premium on mileage. At the same time, diesel technology has gradually been getting cleaner through a combination of lower-sulfur fuel, advanced engines, and new emission-control technology. So automakers have shown a renewed interest in "clean diesel" cars that, in theory, don't suffer from that trade-off between performance and pollution.

These vehicles have proved popular in the United States. Since 2009, Volkswagen has sold more than 482,000 clean diesel cars containing a four-cylinder turbocharged direct injection engine. This included versions of the Passat, Jetta, Golf, Beetle, and Audi's A3. Drivers liked them.

Except, as it turns out, VW was lying about its clean diesel cars.

Volkswagen couldn't balance performance with low pollution. So it cheated.

Since 2009, we now know, Volkswagen had been inserting intricate code in its vehicle software that tracked steering and pedal movements. When those movements suggested that the car was being tested by regulators in the laboratory for nitrogen-oxide emissions, the car automatically turned its pollution controls on. The rest of the time, the pollution controls switched off.

Regulators didn't notice this ruse for years. The problem was only uncovered by an independent group, the International Council on Clean Transportation, which wanted to investigate why there was such a discrepancy between laboratory tests and real-road performance for several of VW's diesel cars in Europe. So they worked with researchers at West Virginia University, who stuck a probe up the exhaust pipe of VW's clean diesel cars and drove them from San Diego to Seattle. (These details come from Dana Hull and Jeff Plungis' excellent Bloomberg tick-tock.)

What the researchers found was jaw-dropping. On the road, VW's Jetta was emitting 15 to 35 times as much nitrogen oxide as the allowable standard. The VW Passat was emitting 5 to 20 times as much. These cars were emitting much more pollution than they had in the labs.

Both California's air-pollution regulator and the EPA ordered Volkswagen to investigate and fix the problem in May 2014, and the company said it had worked on a software patch. Once again, the cars performed well in testing. And once again, real-world performance didn't match up. At that point, regulators started grilling Volkswagen's engineers about the discrepancy, and the company eventually cracked, admitting the existence of these defeat devices, which had been carefully hidden in the software code. Hence the scandal.

Volkswagen hasn't explained exactly why it cheated, but outside analysts have a pretty good guess. The NOx emission controls likely degraded the cars' performance when they were switched on — the engines ran hotter, wore out more quickly, and got worse mileage. Some experts have suggested that the emission controls may have affected the cars' torque and acceleration, making them less fun to drive. (Indeed, some individual car owners have been known to disable their cars' emission controls to boost performance, though this is against the law.)

In other words, Volkswagen wasn't able to produce diesel cars that had the ideal mix of

performance, fuel economy, and low pollution. (Or, at least, they couldn't do this profitably.) So they "solved" this trade-off by sacrificing cleanliness and loosening the emission controls. And they accomplished this via software designed to deceive regulators. This was wildly illegal, and they got caught.

The VW scandal exposes problems with current emission tests

Volkswagen isn't the first company to cheat on its emission tests. As Frank O'Donnell of Clean Air Watch pointed out to me, the EPA caught a number of truck manufacturers, including Caterpillar and Volvo, doing something similar back in 1998 — programming their diesel trucks to emit fewer pollutants in lab tests than they did on the road. (The trucks would slowly emit more and more NOx as they traveled longer distances at constant speed, something that labs couldn't catch.)

Part of the problem here is that regulators tend to test these vehicles in laboratory conditions, which are fairly predictable and hence easier to game. Combined with the fact that automakers are developing ever-more-elaborate software that can control and fine-tune engines, and there are ample opportunities for fraud.

EUROPEAN REGULATORS WILL SOON START REQUIRING ON-ROAD EMISSIONS TESTING

In theory, there are ways to make cheating harder. Starting with model year 2017 vehicles, European regulators are going to start requiring automakers to test their passenger cars on the road in addition to laboratory testing. That sort of regime would've made it harder for Volkswagen to do what it did. But it's also unlikely that this is the last time we'll see an automaker come up with a fiendishly clever way to cheat.

Meanwhile, the VW scandal raises another issue surrounding car regulations, as Alex Davies explains at Wired. Modern-day cars feature complex computer systems and software. And, right now, this software is protected under the 1998 Digital Millennium Copyright Act — it's illegal to fiddle with it. The ostensible rationale is to make it harder for consumers to tamper with emissions controls. But these protections also make it harder for independent researchers to scrutinize that code and identify problems like VW's little emissions trick. Some experts have

proposed DMCA exemptions to allow researchers to test and evaluate these engines, but so far automakers and the EPA have resisted this. Presumably, if those exemptions had existed, Volkswagen might've been caught sooner.

Volkswagen is now facing serious consequences

At this point, Volkswagen has been caught red-handed and has to face the consequences. The company straight-up lied about its cars and exacerbated the country's air-pollution problem. (Getting a precise estimate of the health consequences here could be difficult, since it depends on where the cars were located, how much extra smog actually resulted, and so forth.)

In response, the company has pledged to stop selling 2015 and 2016 Volkswagen and Audi models equipped with clean diesel engines and will likely end up recalling the 482,000 cars now on the road to fix the software.** It's unclear how many customers will want to "fix" the problem, however, since, again, any patch might degrade gas mileage and/or performance.

Meanwhile, Volkswagen could face criminal prosecution — not to mention billions of dollars in fines, potentially. The Clean Air Act allows a fine of $37,500 per noncompliant vehicle. If the EPA really wanted to lower the hammer, that would amount to $18 billion. Again, VW's pretax net income was about $4.7 billion last year, so that would be a crippling hit. Volkswagen is the world's biggest automaker by sales, but it's not quite as profitable as competitors like Toyota and has already struggled to gain a foothold in the US market. This could be a huge deal for the company.

It also raises questions about the future of clean diesel vehicles. Clean diesel appears to be a promising technology — in theory, these vehicles could get both excellent mileage and low emissions. But this scandal raises serious questions about how well automakers can actually achieve both goals in practice.

** For any concerned car owners, the models expected to be recalled include: The 2009-2015 VW Beetle 2.0L TDI; 2009-2015 VW Golf 2.0L TDI; 2009-2015 VW Jetta 2.0L TDI; 2009-2015 Audi A3 2.0L TDI; and 2014-2015 VW Passat 2.0L TDI.

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Ledger Gazette:

http://www.ledgergazette.com/epa-accuses-vw-of-cheating-on-emissions-tests/79148/

EPA accuses VW of cheating on emissions tests

BY JORGE WEINER ON SEPTEMBER 21, 2015 BUSINESS

VW halted sales of the models involved on Sunday and said it's cooperating with the probe and ordered its own external investigation into the issue.

"The charges here are truly appalling: that Volkswagen knowingly installed software that produced much higher smog-forming emissions from diesel vehicles in the real world than in pre-sale tests", said Frank O'Donnell, president of Clean Air Watch, a Washington-based advocacy group.

VW is to stop selling four cylinder diesel cars in the USA after the firm was found to have rigged emissions test on up to 500,000 vehicles, it has emerged. The reality is that Volkswagen will face huge fines, rumoured to be as high as 18 billion US dollars.

German competitors BMW AG and Daimler AG said on Monday they aren't aware of a similar USA probe into their cars.

Once on the road, the cars produced nitrogen oxide pollutants at up to 40 times the legal standard.

The EPA and California authorities acted quickly after being told of the violation, German said.

Volkswagen, which recently edged out Japan's Toyota to become the world's top-selling automaker, has had a hard year, its share price having fallen from more than 250 euros amid signs of faltering sales in the US and China. He said he was "deeply sorry" for the violation of United States rules. The models include Jetta, Beetle, Golf, Passat and Audi A3.

Stefan Bratzel, director at the Center for Automotive Management, a research group, said the damage to VW's image would be as great as the financial fines.

"Our climate policy stands for itself and I think it's internationally recognized that Germany is one of the drivers on the way to (the global climate summit in) Paris", he said. The potential wonderful is $37,500 per vehicle and 482,000 autos are a part of the case, yielding a possible superb of greater than $18 billion, Giles stated on a telephone name with reporters Friday.

The EPA in November 2014 hit South Korean auto makers Hyundai Motor Co. and Kia Motors Corp. with a record $100 million penalty for overstating fuel-economy claims and forced the companies to cough up another $200 million in regulatory credits.

The cars allegedly do so with software that detects when the vehicle is undergoing emissions testing, and then turns full emissions controls on only during the test. When vehicles are being driven normally, the computer disables the emissions controls.

According to the The New York Times, this latent software within numerous Volkswagen vehicles switches on emissions control systems only during an inspection. The California Air Resources Board issued a similar letter.

"Our goal is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules and to take appropriate further action".

The feature, which the EPA called a "defeat device", masks the true emissions only during testing.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 1:57 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

Washington Post:

http://www.washingtonpost.com/business/economy/vw-shares-plunge-as-epa-accuses-automaker-of-cheating/2015/09/21/3c7b2f2e-607b-11e5-8e9e-dce8a2a2a679_story.html

VW under fire amid EPA accusations it cheated on emissions tests

By Thad Moore

Volkswagen shares plunged Monday after U.S. regulators accused the German automaker of cheating on emissions tests, alleging that nearly 500,000 cars weren't meeting federal standards.

An apology Sunday from VW's chief executive did nothing to temper anxious investors, who wiped out nearly a fifth of the company's value in a single day. VW's stock closed the day Monday at 132.20 euros, down 19 percent.

The selloff comes on the heels of Environmental Protection Agency allegations that the automaker had designed software to let its diesel cars detect when they were being tested for emissions.

VW, one of the world's largest automakers, has halted sales of some vehicles in the United States and pledged to cooperate with regulators. "We at Volkswagen will do everything that

must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused," Martin Winterkorn, VW's chief executive, said in a statement.

In the lab, they met standards. On the road, regulators say, they emitted nitrous oxide at up to 40 times federal standards. The software, known as a "defeat device," was installed in some 482,000 cars, spanning model years 2009 through 2015, regulators say.

The EPA and California regulators began asking questions in May 2014 after West Virginia University researchers published a study that found lab results didn't match up with road tests.

For more than a year, VW told regulators that the difference owed to "various technical issues and unexpected in-use conditions," the EPA said in a letter sent to the automaker Friday. But company officials didn't admit to the practice until earlier this month when regulators threatened not to approve its 2016 line of diesel cars.

The years-long practice could carry a hefty price tag for the automaker. The company could be fined $37,500 for each car it sold with a defeat device installed — a potential fine of $18 billion.

"The company will have to recall nearly 500,000 affected cars, which will cost it millions of dollars, and that's even before the damage to its brand and potential fines," Michael Hewson, chief market analyst at CMC Markets, told the Associated Press.

The revelation also led Consumer Reports[consumerreports.org] to pull its recommendation of VW's Jetta and Passat diesel model. (The magazine said it would reconsider its decision once the automaker introduces a fix to lower emissions.)

For his part, Winterkorn apologized Sunday, saying the company would cooperate "with transparency and urgency."

"I personally am deeply sorry that we have broken the trust of our customers and the public," he said in a statement. "We do not and will not tolerate violations of any kind of our internal rules or of the law."

From: Gong, Kristiene
Sent: Monday, September 21, 2015 11:56 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

NY Times:

http://www.nytimes.com/2015/09/22/business/international/volkswagen-shares-recall.html

Volkswagen Denied Deception to E.P.A. for Nearly a Year

By JACK EWING SEPT. 21, 2015

FRANKFURT — For nearly a year, Volkswagen officials told the Environmental Protection Agency that discrepancies between the formal air-quality tests on its diesel cars and the much higher pollution levels out on the road were the result of technical errors, not a deliberate attempt to deceive Washington officials.

But early this month, Volkswagen executives finally made a startling admission: The diesels it sold in the United States had software deliberately designed to cheat on the tests.

The company was evidently concerned that actually meeting the federal emissions standards would degrade the power of the engines, which it marketed as comparable in performance to gasoline engines. Meeting the standard would also undercut the fuel efficiency that is one of the main selling points of diesels.

The admission came only after the E.P.A. threatened to withhold approval for Volkswagen's new 2016 models, according to letters sent to company officials by the E.P.A. and California regulators.

Since news of that mass deception broke on Friday, Volkswagen has scrambled to conduct damage control, with its chief executive issuing an apology and the company saying it would not sell its 2015 and 2016 diesel cars in the United States.

But that did not stop Volkswagen shares from plummeting when trading opened in Europe on Monday. And the apology has not relieved pressure on Martin Winterkorn, the Volkswagen chief executive, whom analysts said would have tough questions to answer, seeking to know when he and other top executives at the company, which is ruled from the top with Germanic precision, were aware of the diesel deception.

Adding to pressure on Volkswagen, the German government said on Monday that it would also begin an inquiry to make sure that Volkswagen and other carmakers are complying with laws on auto emissions.

The E.P.A. disclosed the yearlong series of letters with Volkswagen as part of accusations it made against the company on Friday. The agency will require the company to recall nearly half-a-million vehicles equipped with 2-liter diesel engines dating to the 2009 model year. Volkswagen also faces fines that could run into the billions of dollars.

Volkswagen shares plunged about 20 percent on Monday, as investors registered alarm at the damage the company could suffer.

Mr. Winterkorn issued an apology on Sunday, saying the company had "broken the trust of our customers and the public."

But the sophistication of the software used to manipulate emissions tests in the United States, and extensive attempts by Volkswagen to deflect official scrutiny before admitting misconduct this month, are sure to raise questions about Mr. Winterkorn's effectiveness only months after he

survived an internal power struggle.

"Either he knew, or he didn't know, which is even worse," said Ferdinand Dudenhöffer, a professor at the University of Duisburg-Essen who is a longtime Volkswagen critic. "Any politician in his situation would have to resign."

Volkswagen's supervisory board, which Mr. Winterkorn reports to, will hold a regularly scheduled meeting on Friday, and it is certain to discuss the E.P.A. action.

After being confronted last year with evidence that some diesel models did not comply with pollution standards under certain conditions, Volkswagen executives originally offered technical explanations, according to a letter of complaint sent to the company by the E.P.A. and the California Air Resources Board.

It was only on Sept. 3, according to the letters, that executives at Volkswagen of America, the company's United States unit, admitted that cars equipped with the 2-liter diesel motors contained the software.

The software measured factors such as the position of the steering wheel, the vehicle's speed and even barometric pressure to sense when the car was being subjected to testing, the E.P.A. said. The car then configured itself to reduce emissions of nitrogen oxide, a gas that is a major contributor to smog and is linked to an array of respiratory ailments including asthma, emphysema and bronchitis, the E.P.A. said on Friday.

Volkswagen is known for being a tightly controlled, autocratic organization, raising questions about how such a sophisticated system could have been installed in nearly half a million vehicles without knowledge of top management.

The plunge in Volkswagen shares was a clear indication that investors believe that company profit and sales could suffer because of the E.P.A. accusations. However, Volkswagen is relatively immune to stock market pressure because only 12 percent of its voting shares are traded. Porsche Automobil Holding, controlled by members of the Porsche family, holds a slight

majority. The state of Lower Saxony owns 20 percent and the sovereign wealth fund of Qatar owns 17 percent.

Stephan Weil, the prime minister of Lower Saxony, where Volkswagen has its headquarters and major manufacturing operations, said in a statement on Monday, "Manipulation of an emissions test is completely unacceptable and without any justification."

But Mr. Weil said consequences could be discussed only after a thorough investigation of the circumstances.

In Berlin, the government of Chancellor Angela Merkel said it would ask carmakers for information as the first step in an inquiry.

"We expect reliable information from carmakers so that the Federal Office for Vehicles can check whether similar manipulation in the exhaust systems has taken place in Germany or Europe," Andreas Kübler, a spokesman for the Environment Ministry, told reporters in Berlin.

The European Commission has contacted Volkswagen as well as the E.P.A. for details about the accusations, a commission spokeswoman said.

"It is premature to comment on whether any specific immediate surveillance measures are also necessary in Europe and whether vehicles sold by Volkswagen in Europe are also affected," the spokeswoman said in an email. "We are taking the matter very seriously."

South Korea also planned to test Volkswagen cars to make sure they were in compliance with pollution rules, according to news reports.

More than half of all vehicles sold in Europe are diesels, which are popular because they typically offer better fuel economy than gasoline. European Union pollution rules were more favorable to diesels than United States rules, but they have been progressively tightened. The

most recent standard, known as Euro 6, took effect for all new cars sold on Sept. 1.

Technology exists to reduce the amount of nitrogen oxides emitted by diesels. But the technology also tends to reduce fuel economy as well as performance. The software installed by Volkswagen on vehicles sold in the United States avoided this trade-off, which could have come as a disappointment to American customers, by scaling back pollution controls when the car was not being tested.

The accusations by the E.P.A. are a blow to Volkswagen's efforts to build up its meager market share in the United States, in part by promoting "clean diesel" technology.

The silver lining for Volkswagen, though, may be that its most profitable vehicles in the United States are Porsche and Audi cars not affected by the E.P.A. action. The cars affected are Volkswagen Golf, Jetta, Beetle and Passat models from 2009 through 2015 that are equipped with 2-liter diesel engines.

Another silver lining for Volkswagen may be that diesel powered cars account for only a tiny fraction of sales in China, which is the company's largest market.

Among Audi models, only the compact A3 is affected in the United States. The A3 accounted for less than a fifth of the 111,000 vehicles that Audi sold in the United States from January through August, and only a fraction of those A3s would have been equipped with diesels.

The E.P.A. said on Friday that Volkswagen would be required to recall the affected vehicles for repairs to make them compliant with smog regulations. Car owners would not have to pay for the repairs. Many owners may not bother, though, because the changes are likely to reduce fuel consumption and performance.

John Schilling, a Volkswagen spokesman, said on Sunday that the company would stop selling 2015 and 2016 Volkswagen and Audi models equipped with the 2-liter diesel engines, which the company had marketed as "clean diesel." The company will also stop selling used cars that have the engines, Mr. Schilling said.

He said he did not know how many models would be stuck on dealer lots as a result of the decision. This month, Volkswagen had said that 23 percent of new cars sold in August in the United States were diesels, or 7,400 vehicles. Some diesels, such as those used in Volkswagen S.U.V.s, are not affected by the E.P.A. action.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:54 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

AP (via US News & World Report)

http://www.usnews.com/news/business/articles/2015/09/21/vw-stock-crashes-after-admitting-it-rigged-us-emission-tests

Faulty Tests Cost VW Billions

By FRANK JORDANS and PAN PYLAS, Associated Press

BERLIN (AP) — Around 15 billion euros ($16.9 billion) was wiped off the market value of Volkswagen AG on Monday following revelations that the German carmaker rigged U.S. emissions tests for about 500,000 diesel cars.

By midday trading in Frankfurt, Volkswagen's share price was 19.3 percent lower at a three-year low of 130.20 euros. Its dramatic fall weighed heavily on Germany's main stock index, the DAX, which underperformed its peers in Europe with a 0.6 percent decline.

Volkswagen's market woes Monday follow a weekend that saw the company's reputation for probity seriously damaged by revelations from the Environmental Protection Agency in the U.S.

that it had skirted clean air rules. All told, the EPA indicated that VW faces fines that could run up to more than $18 billion.

The EPA said VW used a device programmed to detect when the cars are undergoing official emissions testing. The software device then turns off the emissions controls during normal driving situations, allowing the cars to emit more than the legal limit of pollutants.

Volkswagen marketed the diesel-powered cars, which account for about 25 percent of sales, as being better for the environment. The cars, built in the last seven years, include the Audi A3, VW Jetta, Beetle, Golf and Passat models.

"The company will have to recall nearly 500,000 affected cars, which will cost it millions of dollars, and that's even before the damage to its brand and potential fines," said Michael Hewson, chief market analyst at CMC Markets.

The agency has ordered VW to fix the cars at its own expense but said car owners do not need to take any immediate action. The EPA insisted that the violations do not pose any safety hazard and said the cars remain legal to drive and sell while Volkswagen comes up with a plan to recall and repair them. However, it said the cars posed a threat to public health.

The EPA also indicated the scale of the fines that could be imposed on VW. It said the carmaker could be hit up to $37,500 per vehicle for the violations — a total of more than $18 billion. The California Air Resources Board is also investigating.

Volkswagen has had a difficult year, its share price having fallen from over 250 euros amid signs of faltering sales in the U.S. and China.

VW edged out Toyota to become the world's top-selling automaker the first half of 2015. But a hit to its reputation from the emissions revelations could hamper its efforts at a sales rebound in the U.S.

If other regulatory authorities decide VW has a case to answer, then the carmaker faces the potential for even bigger fines.

"The news so far revolves around the U.S. impact, but if European investigators become interested the potential penalties could multiply very quickly," said Chris Beauchamp, senior market analyst at IG.

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Washington Examiner:

http://www.washingtonexaminer.com/volkswagen-sorry-promises-probe-on-epa-violations/article/2572497

Volkswagen 'sorry,' promises probe on EPA violations

By DANIEL CHAITIN (@DANIELCHAITIN7) • 9/20/15 3:23 PM

Volkswagen apologized Sunday following allegations by the Environmental Protection Agency and the state of California that hundreds of thousands of diesel cars made by the German automaker are breaking emissions laws in the United States.

"The Board of Management at Volkswagen AG takes these findings very seriously," wrote Martin Winterkorn, CEO of Volkswagen. "I personally am deeply sorry that we have broken the trust of our customers and the public. We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case. Volkswagen has ordered an external investigation of this matter."

On Friday, the EPA and California charged Volkswagen with willfully installing software in its 4-cylinder diesel cars that would allow cars to bypass emission standards. The cars cited for violations include signature Volkswagen cars manufactured between 2009 and 2015, including the Jetta, Passat, Beetle and Golf, as well as the A3 from Audi, Volkswagen's luxury line.

All together, about 482,000 diesel passenger cars sold in the United States since 2008 are included in the allegations.

The statement promises that Volkswagen will "re-establish trust" it may have lost and that the company will reverse any damage done.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," Winterkorn added.

The EPA issued a notice of violation to Volkswagen, while the state of California sent an In-Use Compliance letter. Both the EPA and the California Air Resources Board are conducting separate investigations into the alleged misbehavior.

Recalls are likely, and the combined fines could add up to $18 billion if the result of the investigations support the allegations.

The EPA alleges that the Volkswagen cars are fitted with software to trick emission testers, but that under normal operation emit nitrogen oxides at up to 40 times the standard. Under the Clean Air Act, such an instrument is classified as a "defeat device."

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for the Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

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The Epoch Times:

http://www.theepochtimes.com/n3/1755607-volkswagen-circumvents-epa-rule-its-not-the-first-time/

Volkswagen Skirts EPA Rules; It's Not the First Time

By Arleen Richards

Volkswagen Group of America admitted to sidestepping clean air standards after the EPA and California's clean air watchdog confronted the German automaker with evidence of high in-use emissions from light-duty diesels.

On Friday, Sept. 18, the EPA slapped VW with a notice of violation for using sophisticated software to circumvent national emissions standards. The software, which the EPA calls a "defeat device," is designed to implement full emissions control systems when the car is undergoing state emissions testing. During normal driving, the emissions control is turned off, permitting the significantly harmful diesel fumes to be expelled—40 times more than allowed under the Clean Air Act. VW and the California Air Resources Board (CARB) have both initiated investigations.

Volkswagen CEO Dr. Martin Winterkorn, on Sunday, apologized for breaking the public's trust and vowed to cooperate fully with agency investigations.

He ordered an internal investigation, saying in a statement, "We do not and will not tolerate violations of any kind of our internal rules or of the law."

But this episode is not the first time the EPA or CARB has had run-ins with VW. In the past, both agencies charged VW with similar violations, which resulted in penalties.

Defective Oxygen Sensors

VW previously failed to report its discovery of emission defects in at least 329,000 of its 1999, 2000, and 2001 Golf, Jetta, and New Beetle vehicles.

In May 2001, after conducting a random test, the EPA identified a problem with tailpipe emissions in the 1999 model vehicles caused by a failed oxygen sensor. It turns out, VW knew about the problem for a year already—since it had received numerous warranty claims associated with cracked oxygen sensors—but failed to report it. According to the Clean Air Act, any emission-related defect found in 25 vehicles or engines of the same model year has to be reported within 15 days.

VW spent $26 million in January 2002 to recall all the vehicles and replace or repair the part. Another estimated $660,000 was spent on an enhanced defect tracking system.

The EPA finally settled its case with VW in 2005, penalizing the delinquent car maker $1.1 million.

The state of California has been working closely with the EPA in testing VW cars and issued a separate notice of violation to VW in the current case.

California has been a leader in clean energy investments and set the stage in 2006 for transitioning to a sustainable, low-carbon future with the passage of AB 32, a law requiring sharp reduction in greenhouse gases. Since then, several legislative initiatives have been implemented to build the next generation of clean, fuel-efficient cars.

The CARB implements the state's vehicle regulations through a vigorous certification process, as well as compliance and enforcement programs. It regularly tests vehicles to ensure compliance with air quality standards.

In 2004, VW settled a case with CARB for $552,500 for selling cars in California that had not been properly certified. VW admitted to selling 84 new 2002 vehicles from several retail locations throughout the state, attributed to an error in its electronic ordering system.

The EPA is expected to compel VW to issue a recall notice in order to remedy the current emissions problem, which could take up to a year after identifying the appropriate corrective action and a recall plan.

Jalopnik:

http://jalopnik.com/volkswagen-tells-dealers-to-halt-sales-of-new-tdi-cars-1731923302

Volkswagen Tells Dealers To Halt Sales Of New TDI Cars Amid Diesel Cheating Scandal

Alanis King

Following the government investigation of Volkswagen's diesel emissions, The Detroit News reports the automaker ordered its U.S. dealerships to halt sales of new 2016 and remaining 2015 TDI car models with 2.0-liter diesel engines.

According to the Environmental Protection Agency and California Air Resources Board, VW dodged federal emissions requirements for some 482,000 of its diesel cars — including the Passat, Jetta, Golf, Beetle, SportWagens and Audi A3 — manufactured from 2009 to 2015. The models contain a "defeat device" which exists to detect when the car is under testing conditions, allowing for it to activate the full emissions-control systems only in those circumstances.

In other words, environmental officials say that the street cars are emitting between 10 and 40 times the amount of allowable nitrogen oxide pollution, which is not only illegal but harmful to both the environment and public.

The EPA is taking action on 2016 diesel models. Christopher Grundler, director of the EPA Office of Transportation of Air Quality, said that the government will not grant VW a "certificate of conformity" to sell the 2016 models with 2.0-liter diesel engines, meaning they cannot be sold.

VW dealers have been waiting for the 2016 models to replenish showrooms. Most U.S. VW dealers don't have any remaining 2015 diesel cars to sell.

VW is barred from selling 2016 model vehicles with the 2.0 liter diesel engine until "they get answers to the questions of how these vehicles are being operated. Volkswagen couldn't explain why we're getting these excess emissions," Grundler said.

Meanwhile, whatever 2015 models remain on lots have also been ordered not to be sold. As Automotive News notes, four-cylinder TDI models account for 20 to 25 percent of VW's U.S. sales, so this is going to hurt.

In addition, VW has ordered an outside investigation to find out what happened and "reverse the damage this has caused," CEO Martin Winterkorn said in an apologetic statement.

According to the EPA, the agency is now checking to see if other automakers are bypassing the laws on diesel engines as well.

While no official recall is underway just yet, the News reports:

EPA said VW violated federal law and, in theory, could face fines of up to $18 billion — $37,500 per vehicle — as well as criminal prosecution. Both agencies issued notices of non-compliance to VW Friday, a step necessary before ordering a recall.

The EPA will not take action to stop VW owners from driving their personal cars until a solution is made available, but VW did remove its "clean diesel" advertisements from YouTube and television.

CBC News (Canada):

http://www.cbc.ca/news/business/volkswagen-emissions-rigging-1.3236548

Volkswagen shares plunge on emissions rigging scandal

Consumer Reports suspends 'recommended' rating for Jetta and Passat diesels

CBC News Posted: Sep 21, 2015 9:00 AM ET Last Updated: Sep 21, 2015 9:00 AM ET

Volkswagen's CEO apologized but investors were not in a forgiving mood as the company's stock plunged almost 20 per cent Monday following revelations late last week that the automaker had rigged emissions tests for almost 500,000 diesel cars in the U.S.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn said in a weekend statement.

On Friday, the U.S. Environmental Protection Agency (EPA) revealed that half a million diesel-powered VWs had been programmed to bypass emission controls except during emissions tests. The cars include the Audi A3, VW Jetta, Beetle, Golf and Passat models made in the last seven years.

The EPA ordered VW to fix the cars and VW said it would co-operate with regulators. But the damage to the automaker's image is nothing less than catastrophic.

VW had marketed its diesel-powered cars as being better for the environment. The Associated Press reports, citing an anonymous source with knowledge of the matter, that VW has told dealers to stop selling its 2015 diesel cars with 2.0-litre engines.

The EPA said the VW cars under investigation seemed to pass emissions tests, but in the real world, were actually emitting up to 40 times the national standard for nitrogen oxide, which is linked to asthma and lung illnesses.

Consumer Reports announced it would remove its "recommended" rating from the Jetta and Passat diesels until it can retest the vehicles.

VW could face fines of up to $18 billion US, according to the EPA.

Volkswagen shares plunged 19.4 per cent in Monday trading in Germany, chopping $21 billion Cdn from the market value of the company.

"The company will have to recall nearly 500,000 affected cars, which will cost it millions of dollars, and that's even before the damage to its brand and potential fines," said Michael Hewson, chief market analyst at CMC Markets.

Diesel-powered models account for about a quarter of VW's sales.

Impact in Canada unclear

At this point, it isn't clear what the revelations mean for owners of VW diesels in Canada. Volkswagen Canada told CBC News on Friday that it first learned of the EPA action earlier that morning. It said it would co-operate with Environment Canada "to understand the implications for the Canadian market and what actions, if any, may be required in Canada."

Environment Canada, for its part, said it was in talks with the EPA "to further examine this issue and assess potential implications for Canada." Environment Canada also said it collaborates on emissions verification activities with the U.S. EPA "to ensure our common environmental outcomes are achieved," and pointed out that its emissions standards are aligned with U.S. standards.

The EPA and Environment Canada both stressed that the effectiveness of a vehicle's air pollutant control devices is not a safety issue. The cars remain legal to drive.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:35 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

NY Times:

http://www.nytimes.com/2015/09/21/business/international/volkswagen-chief-apologizes-for-breach-of-trust-after-recall.html?_r=0

Volkswagen to Stop Sales of Diesel Cars Involved in Recall

By JACK EWING and CORAL DAVENPORTSEPT. 20, 2015

FRANKFURT — Volkswagen said on Sunday that it would halt sales of cars in the United States equipped with the kind of diesel motors that had led regulators to accuse the German company of illegally installing software to evade standards for reducing smog.

John Schilling, a Volkswagen spokesman, said that the company would stop selling 2015 and 2016 Volkswagen and Audi models equipped with 4-cylinder turbo diesel engines, which the company has marketed as “clean diesel.” The company will also stop selling used cars that have the engines, Mr. Schilling said.

He said he did not know how many models would be stuck on dealer lots as a result of the decision. Earlier this month, Volkswagen had said that 23 percent of new cars sold in August in the United States were diesels, or 7,400 vehicles.

The confirmation of the halt in sales came on the same day that Martin Winterkorn, the chief executive of Volkswagen, apologized for conduct that prompted the Environmental Protection Agency to order Volkswagen to recall nearly half a million vehicles.

An employee on the Audi A3 limousine. The recall involves four-cylinder Volkswagen and Audi vehicles from the model years 2009 to 2015. Credit Szilard Koszticsak/European Pressphoto Agency

Volkswagen could face billions of dollars in fines for what the E.P.A. said was a deliberate attempt to evade rules on emissions. The decision to stop sales was first reported by The Wall Street Journal.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Mr. Winterkorn said in a statement.

He said the company would "cooperate fully" with the authorities and order its own independent investigation into the accusations.

In his statement, Mr. Winterkorn did not contest assertions by the E.P.A. that Volkswagen sold cars equipped with software that could detect when periodic state government emissions testing was taking place.

Only during such tests are the cars' full emissions control systems turned on. During normal driving situations, the controls were turned off, allowing the cars to spew as much as 40 times the pollution allowed under the Clean Air Act, the E.P.A. said.

Diesel-driven cars have enjoyed something of a renaissance in recent years, shedding much of their old stigma for being dirty, clanky and sluggish to drive, said Karl Brauer, an analyst at Kelley Blue Book. And in the United States, he said, Volkswagen has clearly led the pack — offering diesel vehicles that performed just like their gasoline counterparts.

"Now, we have to wonder if the technology really advanced as far as we thought at VW," Mr. Brauer said. "They must have had a problem making it work in a way that delivered truly clean diesel. At least clean enough to meet the regulations."

Mr. Brauer said the higher nitrous oxide emissions probably allowed better drivability. Fuel economy also improves with more nitrous emissions, and engines can run cooler, and thus wear out more slowly.

"They must have had a mix of performance, economy and durability that they liked, but realized they couldn't achieve that and still get the emissions," he said.

Diesels in particular are known — and marketed — these days as having tremendous torque, or low-end thrust from a stop. If achieving the required emissions affected the torque, making it anemic, then "drivers are going to scratch their heads, thinking, isn't this why I got a diesel?" Mr. Brauer said.

Volkswagen was going through a difficult period even before the accusations became public on Friday. Mr. Winterkorn recently survived a power struggle with the chairman of Volkswagen's supervisory board, Ferdinand Piëch, a scion of the Porsche family who dominated the company for more than two decades before resigning in April.

Following Mr. Piëch's departure, some analysts have raised questions about whether Mr. Winterkorn would be strong enough to hold together the sprawling Volkswagen empire, which also includes Audi and Bentley luxury cars, Porsche and Lamborghini sports cars, Scania and MAN heavy trucks, and Ducati motorcycles.

Although Volkswagen recently surpassed Toyota as the world's biggest automaker measured by the number of cars sold, it is significantly less profitable than its Japanese rival and far weaker in the United States market.

A push by Volkswagen to increase sales in the United States, which included building a factory

in Chattanooga, Tenn., to produce Passat sedans, has fallen short.

"For Volkswagen, it's a huge scandal," said Ferdinand Dudenhöffer, a professor at the University of Duisburg-Essen, who follows the automobile industry. "The timing is extremely unfortunate."

Professor Dudenhöffer said the case could damage all German automakers, which have tried to build acceptance in the United States for diesel engines, a sector in which they believe they have a technological lead.

Until recently, Professor Dudenhöffer said, the United States applied stricter standards to diesel engines than those applied by European regulators. But the European authorities, concerned about the health effects of diesel pollution, have tightened standards, prompting complaints from the auto industry.

Professor Dudenhöffer said that as a result of the E.P.A. action, Mr. Winterkorn could come under pressure to resign.

"Winterkorn was already damaged," Professor Dudenhöffer said. "Now there is an accusation of illegal behavior. This story is not over."

E.P.A. officials issued the car company a notice of violation and said it had admitted to the use of a so-called defeat device.

The recall involves 4-cylinder Volkswagen and Audi vehicles from the model years 2009 to 2015.

The software was designed to conceal the cars' emission of nitrogen oxide, a pollutant that contributes to the creation of ozone and smog, which are linked to a range of health problems, including asthma attacks, other respiratory diseases and premature death.

Disengaging the pollution controls on a diesel-fueled car can yield better performance, including increased torque and acceleration.

California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

Over the next year, E.P.A. officials said, owners of the affected vehicles should expect to receive recall notices from Volkswagen, including information about how to get their cars repaired at no cost to them. The recall covers roughly 482,000 diesel passenger cars sold in the United States since 2009.

Affected diesel models include the 2009-15 Volkswagen Jetta, 2009-15 Beetle, 2009-15 Golf, 2014-15 Passat and 2009-15 Audi A3.

The American investigation could ultimately result in fines or penalties for the company. Under the terms of the Clean Air Act, the Justice Department could impose fines of as much as $37,500 for each recalled vehicle, for a possible total penalty of as much as $18 billion.

The notice of violation came days after the company promoted plans at the Frankfurt International Motor Show to introduce 20 plug-in hybrid or all-electric vehicles by 2020 as part of a campaign to reduce vehicle emissions.

Mr. Winterkorn said in his statement on Sunday that Volkswagen would "do everything necessary in order to reverse the damage this has caused."

"This matter has first priority for me, personally," he said, "and for our entire board of management."

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Financial Times:

http://www.ft.com/intl/cms/s/0/c4f4745c-5f98-11e5-9846-de406ccb37f2.html#axzz3mNpq5JFM

VW apologises for cheating US car exhaust emissions tests

Andy Sharman in London

The chief executive of Volkswagen has apologised and ordered an external investigation into findings that the carmaker cheated on US emissions tests to make its vehicles appear less polluting.

In a statement on Sunday, Martin Winterkorn, chief executive of the German carmaker, said the board of management took the findings "very seriously".

He added: "I personally am deeply sorry that we have broken the trust of our customers and the public. We will co-operate fully with the responsible agencies, with transparency and urgency, to clearly, openly and completely establish all of the facts of this case."

The Environmental Protection Agency on Friday said diesel variants of several VW and Audi models sold in the US over six years — including the VW Passat, Beetle and Audi A3 — had been fitted with sophisticated algorithms designed to deceive the laboratory testing regime.

The authorities ordered VW to recall 482,000 cars because of the use of so-called defeat devices — which use software to detect when the car is being tested and runs treatments to reduce nitrogen oxides. Once out on the road, the cars were discovered to produce pollutants up to 40 times the legal limits.

The discovery leaves the German carmaker — which has admitted to using the defeat devices —

potentially facing billions of dollars in fines and warranty costs, possible criminal charges for executives and class-action lawsuits from US drivers.

Mr Winterkorn did not say who would be carrying out the external investigation, and the company declined to provide further details.

It was Mr Winterkorn's first formal statement on an issue that also threatens to seriously undermine its attempts to turnround its sputtering performance in the US.

Max Warburton, analyst at Bernstein Research, said: "The best case for VW is probably still a multibillion-dollar fine, pariah status in the US with government — and possibly consumers — [and] damage to its leading position in diesel in the US."

VW now has to initiate a process to fix the cars' emissions systems, though the EPA has said the violations do not present a safety hazard and the vehicles remain legal to drive and resell. Owners of cars of models covering the 2009-2015 period do not need to take any action, the agency said.

I personally am deeply sorry that we have broken the trust of our customers and the public. We will co-operate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case

- Martin Winterkorn, VW chief

In addition to the costs of the recall campaign, VW could theoretically also face fines of up to $37,500 per vehicle — a total of more than $18bn — though analysts have said VW is likely to face a much lower penalty.

The case is a rare but not unique example of this type of manipulation by the motor industry. In 1998, a group of truckmakers including Navistar, Renault and Volvo paid more than $1bn to resolve claims they installed defeat devices on heavy duty diesel engines. These devices allowed an engine to pass the emissions test, but then turn off emission controls when on the road, the

EPA said at the time.

The EPA has been active in the past year, securing a record $300m settlement with Hyundai and Kia over claims the Korean affiliates overstated the fuel economy of their cars.

The Guardian:

http://www.theguardian.com/business/2015/sep/20/vw-software-scandal-chief-apologises-for-breaking-public-trust

VW software scandal: chief apologises for breaking public trust

Martin Winterkorn orders external investigation after US regulators found cars gave inaccurate data on toxic emissions

Volkswagen has ordered an external investigation after US regulators found that the carmaker designed software for close to half a million diesel cars that gave false emissions data, its CEO said, adding he was "deeply sorry" for the violation of US rules.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn said in a statement published on Sunday by the carmaker on Sunday. "Volkswagen has ordered an external investigation of this matter."

The US Environmental Protection Agency (EPA) said on Friday the software deceived regulators measuring toxic emissions, adding that Volkswagen could face fines of up to $18bn (£11.5bn) as a result. The carmaker could face penalties of $37,500 for each car not in compliance with clean air rules. The diesel-powered models from 2009-2015 are the VW Jetta, Beetle and Golf, the Passat model from 2014-15, and the Audi A3 from 2009 to 2015.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," said

Winterkorn, adding the company was fully co-operating with the relevant agencies. He gave no details on who would carry out the external investigation.

Cynthia Giles, an enforcement officer at the EPA, said on Friday that the cars in question "contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test".

"VW was concealing the facts from the EPA, the state of California and from consumers. We expected better from VW," she said. "Using a defeat device in cars to evade clean air standards is illegal and a threat to public health."

The EPA accused Volkswagen of using the device in 482,000 four-cyclinder Volkswagen and Audi diesel cars in the US since 2008. VW must recall all the cars, remove the defeat device and improve the cars' NOx emissions, which creates smog and has been linked to increased asthma attacks and other respiratory illnesses.

The feature, which the EPA called a defeat device, masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, said Giles.

Volkswagen suspended sales of cars containing the company's four-cylinder turbo direct injection (TDI) engine on Friday in light of the investigation. The "clean diesel" engine is commonly used in models including VW's Beetle, Golf, Jetta, Passat and the A3 luxury compact made by VW-owned Audi.

Richard Corey, executive officer of the California Air Resources Board (Carb), said on Friday: "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The EPA and Carb discovered the defeat device software following independent analysis by researchers at West Virginia University, who were promoted into action by the International

Council on Clean Technology, an NGO.

When confronted with the EPA and Carb's evidence, VW admitted that its cars were fitted with the defeat device.

The crackdown on Volkswagen comes as the Obama administration is attempting to cut air pollution from an array of sources, including the vehicle industry, power plants and oil and natural-gas providers. The EPA set new carbon rules for big trucks earlier this year and has told all vehicle makers they must sell light vehicles averaging 54.5 miles a gallon by 2025.

In Europe, new laws have forced manufacturers to test their cars under real world conditions and not in laboratories, helping to reduce unrealistic claims about emissions. By 2017 all new cars will have to be more stringently tested, effectively ending an era when car makers could exaggerate the performance of their machines.

UK car industry group the SMMT claims that, because of European legislation to cut tailpipe pollution, Britain's air quality is better now than it has been for centuries.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:26 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

The Hill:

http://thehill.com/policy/energy-environment/254323-volkswagen-head-apologizes-for-epa-accusations

Volkswagen head apologizes after EPA accusations

By Timothy Cama - 09/20/15 01:28 PM EDT

The head of German automaker Volkswagen Group apologized Sunday after allegations surfaced that his company deliberately tried to evade United States air pollution laws.

Martin Winterkorn, the company's chief executive officer, said he was "deeply sorry" for violating the trust of customers and the public, and said that Volkswagen had ordered an external investigation into the matter.

Volkswagen faces up to $18 billion in fines for the violations under the Clean Air Act, under which the Environmental Protection Agency (EPA) sets air pollution rules for motor vehicles.

"We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly, and completely establish all of the facts of this case," Winterkorn said in a Sunday statement

"We do not and will not tolerate violations of any kind of our internal rules or of the law."

Winterkorn stopped short of admitting to the EPA's allegations.

On Friday, the EPA said it had discovered that about 482,000 diesel vehicles sold by VW and its subsidiary Audi in the United States had "defeat devices" that detect when the vehicle is undergoing an EPA emissions test and turn on equipment that controls output of nitrogen oxides to acceptable levels.

At all other times, the EPA said, the vehicles emitted more pollutants, sometimes exceeding allowable volumes by 40 times.

The agency has not yet officially charged Volkswagen with any civil or criminal penalties, nor did it order any recalls of the affected vehicles. California, which has its own emissions regulations, is also accusing the company of violating air rules.

"We at Volkswagen will do everything that must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused," Winterkorn said, adding that the issue is the top priority for him and the entire management team.

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Reuters:

http://www.reuters.com/article/2015/09/21/usa-volkswagen-idUSL1N11R0L020150921

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

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Christian Post:

http://www.christianpost.com/news/volkswagen-to-recall-almost-500000-cars-in-the-us-over-epa-violation-145778/

Volkswagen to recall almost 500,000 cars in the US over EPA violation

BY LORRAINE CABALLERO , CHRISTIAN POST CONTRIBUTOR

Volkswagen will recall almost 500,000 vehicles released from 2009 to 2015 in the United States after the carmaker allegedly violated the law by using illegal software, which helped it go past environmental restrictions.

The Environmental Protection Agency (EPA) said Volkswagen broke the law by installing a "defeat device" in Volkswagen and Audi units with four-cylinder turbo diesel engines released from the year 2009 to 2015. Under normal driving conditions, the emission control devices installed in the said cars worked with reduced efficacy, according to the Dispatch Times.

In the wake of the violation, Volkswagen chief executive Martin Winterkorn delivered a statement apologizing to their customers and vowing to cooperate with EPA's investigation. However, he did not deny the allegations regarding the illegal software, the International Business Times reports.

"I personally am deeply sorry that we have broken the trust of our customers and the public," said Winterkorn in his statement.

Because of the notice of violation from the EPA, Volkswagen is now facing penalties amounting to more than $18 billion, or around $37,500 per unit, based on the U.S.A. federal Clean Air Act. EPA and CARB discovered the illegal software after researchers at the West Virginia University conducted an independent study in cooperation with the global Council on Clean Transportation, the report adds.

Volkswagen has been struggling to sell cars in the United States because of the rising cases of asthma and other respiratory illnesses caused by air pollutants. The diesel vehicles affected by the recall were being counted on to pull up the company's sales in the United States.

Based on the findings of the EPA, Volkswagen had included a certain algorithm in the cars' emissions software that could detect when an emission test is being conducted.

Owners of the diesel cars affected by the recall will be notified by Volkswagen by next year, EPA said. Until Consumer Reports can "retest" the said cars, the recommended rating for the Passat, Jetta, Golf, Beetle, and Audi A3 luxury compact will remain on hold, the report relays.

From: Gong, Kristiene
Sent: Monday, September 21, 2015 10:14 AM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/21/2015

AP (via Boston Globe):

https://www.bostonglobe.com/business/2015/09/20/chief-sorry-after-epa-says-firm-skirted-clean-air-law/3NNTCf2cVxUI1qYNBfMe7L/story.html

Volkswagen chief apologizes for rigging tests of emissions

By Paul Wiseman and Tom Krisher ASSOCIATED PRESS SEPTEMBER 21, 2015

WASHINGTON — The chief executive of Volkswagen apologized Sunday and VW customers said they felt duped after the Environmental Protection Agency revealed that the German automaker had skirted clean air rules by rigging emissions tests for about 500,000 diesel cars.

''I personally am deeply sorry that we have broken the trust of our customers and the public,'' Volkswagen chief Martin Winterkorn said in a statement. He said VW has ordered an investigation and promised that the company would cooperate with regulators.

On Friday, the EPA said VW used software that allowed its diesel cars to release fewer smog-causing pollutants during tests than in real-world driving conditions.

The cars, built in the last seven years, include the Audi A3, VW Jetta, Beetle, Golf, and Passat models. The agency ordered VW to fix the cars at its own expense. VW also faces fines that could add up to billions of dollars.

VW edged out Toyota to become the world's top-selling automaker in the first half of 2015. But a hit to its reputation from the emissions revelations could hamper its efforts at a sales rebound in the United States. Between 2013 and 2014, VW sales plummeted 10 percent, even as overall industry sales rose 6 percent. US buyers want SUVs, and Volkswagen doesn't have competitive vehicles to offer them.

The magazine Consumer Reports almost immediately suspended its ''recommended'' rating on the Jetta and Passat diesels until it can get recall repairs and retest the cars.

Volkswagen marketed the diesel-powered cars, which account for about 25 percent of its sales, as being better for the environment. After the EPA acted, VW withdrew ads for its diesel cars from Youtube.com and asked dealers to stop selling 2015 diesel cars with 2.0-liter engines, according to a person familiar with the matter.

Some VW customers were furious.

Zeeshan Shah, 39, of Fulton, Md., said that he bought a Volkswagen Diesel Passat 2015 in July after he totaled his Jetta two years ago.

''The selling point" for the Diesel Passat was that the technology was so good, he said. Now, Shah plans to return the car back to the dealer to have it examined and doesn't want to buy another Volkswagen. ''Once they cheat you on this issue, what other issues can they cheat you on?'' he said. ''You don't trust them.''

John German, senior fellow at the International Council on Clean Transportation, the group that blew the whistle on VW, said it didn't expect to find any violators when it contracted with West Virginia University to test cars with diesel engines.

The council, a research group that helps governments write regulations, did the US tests in an effort to show that automakers were complying with US nitrogen oxide emissions standards, which are stricter than in other countries, he said.

The EPA said VW faces fines of up to $37,500 per vehicle for the violations, a total of more than $18 billion.

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WSJ:

http://www.wsj.com/articles/volkswagen-ceo-apologizes-after-epa-accusations-1442754877

Volkswagen Halts U.S. Sales of Certain Diesel Cars

Auto maker also begins external probe after EPA accuses company of dodging emissions rules

By WILLIAM BOSTON, AMY HARDER and MIKE SPECTOR

Updated Sept. 20, 2015 8:57 p.m. ET

Volkswagen AG's crisis over allegedly cheating on U.S. emissions tests deepened, with the German auto maker halting American sales of popular diesel-powered cars and issuing a sweeping apology for violating customers' trust.

It also launched an external investigation. Shares in the company slumped more than 20% in early trading Monday in response to the crisis.

The company could face billions of dollars in fines and the crisis could further weaken Volkswagen Chief Executive Martin Winterkorn's position. He narrowly survived efforts by a major shareholder to oust him earlier this year and was passed over for the chairman's job, the company's top post, this month.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Mr. Winterkorn said in a statement issued by the company on Sunday, adding that VW is

cooperating with authorities and has commissioned an external probe.

The U.S. is crucial in Volkswagen's efforts to become the world's leading auto maker by sales. The German company has built its campaign to grow in the U.S. market on a promise that its clean-diesel engines deliver better performance and low emissions. It is neck-and-neck with reigning sales leader Toyota Motor Corp. and overtook the Japanese car maker during the first half of this year. But the emissions test probes could stall its progress.

Even prior to the emissions issue, the auto maker's namesake Volkswagen brand has been battling declining sales in the U.S. market. And Audi AG, its luxury car maker, is finding it hard to catch up in the U.S. with rivals BMW AG and Daimler AG, which makes Mercedes-Benz vehicles.

On Friday, the U.S. Environmental Protection Agency and the California Air Resources Board alleged that Volkswagen used software, dubbed a "defeat device," in the cars to make diesel-powered engines appear to have lower levels of emissions than they actually did.

About 482,000 Volkswagen diesel-powered cars were affected.

The EPA probe could force Volkswagen and its Audi unit to recall thousands of vehicles that contain the company's "clean diesel" engines. The four-cylinder 2.0-liter turbo direct injection, or TDI, engine is commonly found in Volkswagen's Passat, Jetta, Golf, Beetle and in Audi's A3 luxury compact model.

A Volkswagen spokesman on Sunday said the auto maker halted the sale of all 2015 and 2016 models containing the four-cylinder 2.0 liter TDI engine. The EPA investigation affects cars sold since 2008. The company hasn't issued a recall, the spokesman said.

Realization that Volkswagen may have cheated to get better emissions results could undermine its U.S. recovery and further weaken its shares, which are down 37% from their peak on March 16, said analysts.

"There is no way to put an optimistic spin on this—this is really serious," said Max Warburton, an analyst with Bernstein Research. "The best case for VW is probably still a multi-billion dollar fine."

Consumer Reports, an influential magazine when it comes to car reviews, last week suspended "recommended" ratings on the auto maker's Jetta and Passat diesel-engine models after the EPA disclosed its allegations. Consumer Reports said the recommendations would be suspended until it can retest the vehicles once they are repaired. The magazine said it would then assess whether the cars' fuel economy worsened.

A production line at a Volkswagen plant in Wolfsburg, Germany. ENLARGE

A production line at a Volkswagen plant in Wolfsburg, Germany. PHOTO: REUTERS

Laurie Cleveland, a 54-year-old English teacher from Lowville, N.Y., said she bought a new 2015 VW Passat TDI over the Labor Day weekend. She isn't sure what to do now. She said it is her fourth Volkswagen diesel car since 2006.

"I feel like I've been deceived," she said. "I'm a person who likes to be environmentally friendly," she added.

Mr. Winterkorn on Sunday vowed to do "everything necessary" to regain public trust in the company.

"We do not and will not tolerate violation of any kind of our internal rules or of the law," he said. "This matter has first priority for me."

U.S. officials said Volkswagen violated two parts of the federal Clean Air Act and could face fines of as much as $37,500 per car, or more than $18 billion. It remained unclear whether the government would seek such an onerous penalty.

The EPA in November 2014 hit South Korean auto makers Hyundai Motor Co. and Kia Motors Corp. with a record $100 million penalty for overstating fuel-economy claims and forced the companies to cough up another $200 million in regulatory credits.

The EPA has said the vehicles remain safe and legal to drive. The agency is working with the Justice Department and an investigation is continuing.

Officials alleged that Volkswagen used software that activates full emissions controls only during testing but then reduces their effectiveness during normal driving. The result is that cars can emit nitrogen oxides at up to 40 times the allowable standard, the agency said. Diesel-powered cars are a small part of overall U.S. car and light-truck sales.

Experts say that the software enables cars to get better fuel economy at the expense of higher nitrogen-oxide emissions, which was likely one reason VW was using them, according to Margo Oge, who recently retired as director of the EPA's Office of Transportation and Air Quality after more than 30 years at the agency.

Volkswagen's apparent motivations on the emissions tests were unclear. An EPA spokeswoman has said it would be "premature to speculate on why VW did this."

A Volkswagen spokesman in Wolfsburg, Germany, on Sunday said, "We are now in the investigation phase and have no comment beyond what is in the statement that we published today."

California is separately investigating the auto maker.

The International Council on Clean Transportation, a nonprofit research organization that works with governments to cut air pollution from mobile sources, and West Virginia University researchers uncovered Volkswagen's alleged use of defeat devices in research and testing over the last couple of years.

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Reuters:

http://www.reuters.com/article/2015/09/20/us-usa-volkswagen-ceo-idUSKCN0RK0IK20150920

Volkswagen to halt U.S. sales of some 2015 diesel cars

FRANKFURT/HAMBURG | BY CHRISTOPH STEITZ AND JAN SCHWARTZ

Volkswagen (VOWG_p.DE) told U.S. dealers to halt sales of some 2015 diesel cars after regulators found software it designed for the affected vehicles gave false emissions data, the company said Sunday, announcing it had launched an investigation.

In a statement published by the carmaker on Sunday, Chief Executive Officer Martin Winterkorn said, "I personally am deeply sorry that we have broken the trust of our customers.

"Volkswagen has ordered an external investigation of this matter," he said.

The U.S. Environmental Protection Agency (EPA) said on Friday the software deceived regulators measuring toxic emissions, adding that Volkswagen could face fines of up to $18 billion as a result.

The Detroit News reported late Friday that VW dealers still had some 2015 diesel Jetta, Passat and Beetle cars for sale.

A VW representative on Sunday confirmed the partial halt of sales of the affected vehicles but did not give any numbers.

Winterkorn said, "We do not and will not tolerate violations of any kind of our internal rules or of the law," adding that the company was fully cooperating with the relevant agencies.

He gave no details on who would carry out the external investigation.

"This is not your usual recall issue, an error in calibration or even a serious safety flaw," Bernstein analysts wrote in a note on Sunday. "There is no way to put an optimistic spin on this - this is really serious."

Cynthia Giles, an enforcement officer at the EPA, said on Friday the cars in question "contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test".

The feature, which the EPA called a "defeat device," masks the true emissions only during testing. When the cars are on the road, they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

"We have admitted to it to the regulator. It is true. We are actively cooperating with the regulator," a Volkswagen spokesman said on Sunday.

Volkswagen could face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. Some 482,000 four-cylinder VW and Audi diesel cars sold since 2008 are involved in the allegations.

If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed during the telephone conference on Friday.

Volkswagen peer Daimler, meanwhile, signaled it may not be subject to the same violation.

"I have a rough idea of what is happening and that it does not apply to us," Daimler Chief Executive Dieter Zetsche said on Sunday at an event in Hamburg.

"But it is much too early to make a final statement on this," he added.

-

USA Today:

http://www.usatoday.com/story/money/cars/2015/09/20/volkswagen-ceo-martin-winterkorn-apologizes-epa-clean-air-act-emissions-violations/72519678/

Volkswagen issues sales halt; CEO apologizes on emissions cheating

Nathan Bomey, USA TODAY 8:02 a.m. EDT September 21, 2015

Volkswagen has admitted cheating U.S. diesel emissions tests, sending company shares plunging as much as 23 percent in Frankfurt and potentially leaving the company open to billions of dollars in fines. Bloomberg

Martin Winterkorn ordered an external investigation after the EPA disclosed the violations.

Volkswagen's CEO said he is "deeply sorry" for violating U.S. emissions standards and ordered an external investigation Sunday, two days after the Environmental Protection Agency (EPA) accused the automaker of purposefully manipulating emissions tests for almost 500,000 vehicles.

The German automaker ordered its U.S. dealerships to stop selling cars impacted by the probe until its engineers can deliver a fix.

The EPA accused Volkswagen of installing software on 482,000 diesel cars in the USA that allowed it to cheat emissions tests, potentially exposing people to harmful pollutants at levels of 40 times the acceptable standard and respiratory conditions such as asthma.

"I personally am deeply sorry that we have broken the trust of our customers and the public," Martin Winterkorn, Volkswagen's CEO, said in a statement. "We will cooperate fully with the responsible agencies, with transparency and urgency, to clearly, openly and completely establish all of the facts of this case." Winterkorn pledged to regain the public's trust.

The violations could expose Volkswagen — the world's largest vehicle manufacturer through the first six months of 2015 — to up to $18 billion in federal fines if the EPA assesses the maximum possible penalty of $37,500 per vehicle.

The violations could invite charges of false marketing by regulators, a vehicle recall and payment to car owners, either voluntarily or through lawsuits. Volkswagen advertised the cars under the "Clean Diesel" moniker.

The state of California is investigating the emissions violations.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," Winterkorn said. The company's board takes the allegations "very seriously," he said.

The EPA accused the German automaker of adopting what it called a "defeat device" to trick U.S. regulators into believing its cars met Clean Air Act standards for nitrogen oxides. Volkswagen admitted to investigators it had installed the defeat device, the EPA said.

The EPA said impacted cars include the 2009 to 2014 Volkswagen Jetta, Beetle and Golf, the 2014 and 2015 Volkswagen Passat and the 2009 to 2015 Audi A3.

Volkswagen told dealers they cannot sell the 4-cylinder diesel versions of those cars until a fix is available, Volkswagen spokesman Mario Guerreiro said Sunday.

The sales halt could put a significant dent in the company's September sales performance. About 20% of Volkswagen's vehicle sales are diesel engines, said AutoPacific analyst Dave Sullivan.

"It totally goes against all of the marketing they have had of a clean diesel," Sullivan said of the violations. "That's one of the biggest selling points for Volkswagen."

"The trust of our customers and the public is and continues to be our most important asset," Winterkorn said Sunday. "We at Volkswagen will do everything that must be done in order to re-establish the trust that so many people have placed in us, and we will do everything necessary in order to reverse the damage this has caused. This matter has first priority for me, personally, and for our entire Board of Management."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 3:22 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Sacramento Bee:

http://www.sacbee.com/news/business/article35709432.html

Regulators order Volkswagen recalls over device used to trick smog tests

BY DALE KASLER

In a joint probe with California air regulators, the federal government Friday told Volkswagen to recall 480,000 diesel-fuel cars, charging the automaker with equipping the cars with software

designed to circumvent pollution limits.

The U.S. Environmental Protection Agency and California Air Resources Board sent notices to the German automaker over its alleged use of something called a "defeat device," a piece of software that controls emissions during smog tests but not when the vehicles are actually on the road.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant EPA administrator, in a prepared statement. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules."

The EPA sent Volkswagen a "notice of violation" and told car owners they can expect a recall notice. The agency said all repairs will be done at Volkswagen's expense. It added that the cars are safe to drive. The EPA has the authority to order automotive recalls.

Stanley Young, a spokesman for the ARB, said the federal and state agencies were first notified of the problem by independent researchers at West Virginia University and the International Council on Clean Transportation. Months of followup testing, including tests at an ARB lab in El Monte, confirmed the analyses.

Volkswagen officials in early September "admitted to CARB and EPA staff that these vehicles were designed and manufactured with a defeat device," according to an enforcement letter the California agency sent Friday to Volkswagen officials.

Young said "our major goal is to ensure that these cars come into compliance, that they're the same in the real world as they are on the test bench." The automaker eventually could face fines or other enforcement actions, he said.

The agencies plan to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," said Richard Corey, executive officer of ARB, in a prepared statement.

The EPA said the recall affects VW Jettas, Beetles, Golfs and Audi A3s made in the 2009 to 2015 model years. It also covers VW Passats made in the 2014 and 2015 model years. Only diesel cars are affected. Young said ARB believes there are as many as 50,000 affected vehicles on the road in California.

Under the federal Clean Air Act, California has the authority to set its own regulatory standards for car emissions.

Volkswagen of America spokesman Darryll Harrison Jr. said the company is cooperating with the federal and state agencies but had no further comment.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 3:10 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

The Atlantic:

http://www.theatlantic.com/technology/archive/2015/09/volkswagens-game-of-make-belief/406159/

Volkswagen's Game of Make-Believe

The company inserted a device into almost 500,000 cars meant to trick emissions testing, the EPA says.

ROBINSON MEYER

One of the great lessons of the pioneering computer scientist Alan Turing is this: Computers are

only pretending machines. Software is always just imitating something else.

Volkswagen seems to have taken this maxim to new heights. The Environmental Protection Agency alleges that the company installed "defeat devices" in its four-cylinder Volkswagen and Audi-brand diesel cars from 2009 to 2015.

These devices, essentially, let the cars pretend to not break the law. The software could sense when the car was undergoing emissions testing and activate its pollution-control systems accordingly. When the car was being driven during normal use, these systems largely did not activate—making the car a much heavier polluter in real-life than it looked on paper.

With those systems deactivated, the car's emissions violated the Clean Air Act and California's state pollution-control regulation.

"Using a defeat device in cars to evade clean-air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance, in a statement.

There are almost 500,000 vehicles on American roads with the devices installed, according to the EPA. Volkswagen must now pay to repair the emissions systems in affected cars. The government may also fine the company as much as $18 billion.

The device was discovered by researchers at West Virginia University, who notified the EPA and California state authorities. The two authorities investigated further, and after demanding "an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices," said a statement from the agency.

I reached out to Volkswagen for comment and haven't heard back yet. The Times reports that the company is complying with investigations.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:58 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Mashable:

http://mashable.com/2015/09/18/volkswagen-recall-emissions/#uL1ctrM4JZkb

Volkswagen urged to recall cars for allegedly cheating emissions test

BY CHRIS PERKINS

Automakers are under intense pressure to meet emissions regulations put in place by the world's governments. Volkswagen allegedly had a slightly different solution.

The U.S. Environmental Protection Agency (EPA) ordered a recall of almost 500,000 Volkswagen and Audi vehicles equipped with four-cylinder diesel engines, for software designed to sidestep emissions regulations, reports the New York Times.

In total, 482,000 vehicles are being implicated, including the 2009-2015 Volkswagen Golf, Beetle, Jetta and Beetle, the 2014-2015 Volkswagen Passat and the 2009-2015 Audi A3. The cars were possibly installed with a "defeat device," a piece of software designed to detect when the car is undergoing emissions testing and turn on all of the car's emissions control systems then. In normal driving, the systems would turn off, causing 40 times larger nitrogen oxide emissions, according to the E.P.A.

Nitrogen oxide is a major contributor to smog, which can lead to increased respiratory problems and premature death.

The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation. The installation of this software is in violation of the Clean Air Act, and as such, the E.P.A, the State of California and the Department of Justice will launch an investigation.

U.S. regulators hope that this recall will send a message to automakers to not develop software to skirt regulations. Last November, Hyundai and Kia were fined $100 million for violating the Clean Air Act. The two companies inflated their fuel economy figures for their 2012 vehicles.

The likely reason why Volkswagen could go the trouble to develop and use software like this is to boost performance; emissions control equipment tends to suck power out of an engine.

Researchers from West Virginia University, working with the International Council on Clean Transportation, discovered the software, according to the EPA's press release.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time," said a representative for Volkswagen.

A representative for the EPA wasn't immediately available for comment.

It's unclear if this issue only pertains to U.S. model Volkswagens and Audis equipped with four-cylinder diesels, or their world-market counterparts as well.

A report from Jalopnik notes that all of Volkswagen's ads for its diesel models have been deleted from YouTube, apparently at the company's request.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:51 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Christian Science Monitor:

http://www.csmonitor.com/Business/In-Gear/2015/0918/Why-the-EPA-is-forcing-Volkswagen-to-recall-nearly-500-000-cars

Why the EPA is forcing Volkswagen to recall nearly 500,000 cars

Volkswagen AG, the German car manufacturer, is under investigation by California and US emissions regulators for allegedly circumventing emission tests with a new device.

By Corey Fedde, Staff SEPTEMBER 18, 2015

Volkswagen AG is under investigation for circumventing clean air rules.

German automotive company Volkswagen AG is under investigation by California and US environmental regulators. The US Environmental Protection Agency told Reuters Volkswagen allegedly used software to circumvent emissions testing of specific air pollutants.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an EPA enforcement officer, told Reuters via teleconference.

The feature, known as a "defeat device," is allegedly present in 4 cylinder Volkswagen and Audi vehicles from 2009-2015, which total nearly 500,000 vehicles. The device is programmed to detect when the car is undergoing an emissions test and turn on the full emissions controls. The device then turns the emission controls off during normal driving. The result being far more

pollution than the company reported, the EPA told The New York Times.

The pollutant the "defeat device" is designed to conceal, nitrogen oxide, has been linked by public health officials to variety of health problems, including asthma.

The 500,000 diesel vehicle models affected include 2009-2015 Volkswagen Jettas, Beetles, Golfs, Passats, and Audi A3s.

The violation and investigation belie a growing trend in more aggressive environmental enforcement from federal regulators. In November 2014, the administration announced its largest ever penalty for a violation of the Clean Air Act on Korean automakers Hyundai Motor and Kia Motors. The fine involved a $300 million settlement for overstating vehicle fuel-economy standards on more than 1 million cars.

According to The New York Times, analysts say the crackdown is meant to send a clear message to automakers that circumventing federal rules will not be tolerated.

California, the EPA, and the Justice Department are working together on the investigation.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health. Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations," Ms. Giles told the Times.

This report includes material from Reuters.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 2:27 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert

Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Reuters:

http://www.reuters.com/article/2015/09/18/us-usa-volkswagen-idUSKCN0RI1VK20150918

Volkswagen could face $18 billion penalties from EPA

WASHINGTON | BY TIMOTHY GARDNER

Volkswagen AG (VOWG_p.DE) could face penalties up to $18 billion after being accused of designing software for diesel cars that deceives regulators measuring toxic emissions, the U.S. Environmental Protection Agency said on Friday.

"Put simply, these cars contained software that turns off emissions controls when driving normally and turns them on when the car is undergoing an emissions test," Cynthia Giles, an enforcement officer at the EPA, told reporters in a teleconference.

Volkswagen can face civil penalties of $37,500 for each vehicle not in compliance with federal clean air rules. There are 482,000 four-cylinder VW and Audi diesel cars sold since 2008 involved in the allegations. If each car involved is found to be in noncompliance, the penalty could be $18 billion, an EPA official confirmed on the teleconference.

A U.S. Volkswagen spokesman said the company "is cooperating with the investigation; we are unable to comment further at this time."

The feature in question, which the EPA called a "defeat device," masks the true emissions only during testing and therefore when the cars are on the road they emit as much as 40 times the level of pollutants allowed under clean air rules meant to ensure public health is protected, Giles said.

The EPA accused Volkswagen of using software in four-cylinder Volkswagen and Audi diesel cars from model years 2009 to 2015 made to circumvent emissions testing of certain air pollutants.

The cars are not facing recall at this time, the EPA said.

The diesel-powered vehicles involved from the 2009 to 2015 model years are the VW Jetta, VW Beetle, VW Golf and the Audi A3, as well as the VW Passat from model years 2014 and 2015.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:40 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

The Hill:

http://thehill.com/policy/energy-environment/254188-epa-accuses-vw-of-going-around-federal-emissions-standards

Feds accuse VW of going around federal emissions standards

By Devin Henry - 09/18/15 12:50 PM EDT

The Environmental Protection Agency (EPA) is accusing Volkswagen of looking to circumvent federal air pollutant emission standards for the last six years.

EPA officials alleged Friday that about 482,000 VW vehicles sold since 2008 violate the Clean Air Act due to software installed on the vehicles that turns off required air pollution protections.

Janet McCabe, an acting assistant administrator, said the EPA “intends to hold VW responsible to recall the vehicles” and fix the emissions problem. The company could face up to an $18 billion fine for the violations.

The EPA issued VW a Clean Air Act violation notice Friday, alleging it used a software algorithm on certain vehicles that would turn on emission controls only when they undergo official emissions testing.

This "defeat device,” the EPA said, would switch off those controls during normal operation, which means the vehicles could emit up to 40 times the amount of nitrogen oxide allowed under federal air pollution standards.

“These violations are very serious … not only because they result in excess emissions, but also because VW was concealing the fact from EPA, the state of California and from consumers,” Assistant Administrator Cynthia Giles said. “We expected better from VW.”

Federal law requires manufacturers to certify to the EPA that their cars meet emissions standards before selling their vehicles in the U.S. Cars with defeat devices cannot be certified, the EPA said.

A VW statement said only that the company had received the violation notice and is cooperating with the investigation.

The EPA and the California Air Resources Board discovered the defeat device during an analysis at West Virginia State University, the EPA said. Officials said their investigation into the incident is ongoing and wouldn’t give many more details about how it developed or what the outcome might be.

The agency is not ordering a recall or announcing penalties at the moment, and officials said the

cars are safe and legal to drive. The Friday announcement, Giles said, was meant to "inform the public right away and to put VW on notice of our continuing investigation."

The EPA said the announcement covers VW Jettas, Beetles, Golfs and Audi A3s with model years between 2009 and 2015, as well as the VW Passat with model years 2014 and 2015.

Fortune:

http://fortune.com/2015/09/18/volkswagen-recall-epa-smog/

Volkswagen ordered to recall almost a half-million cars over emissions trick

by Benjamin Snyder

The Environmental Protection Agency is ordering Volkswagen to recall nearly a half-million cars after the company allegedly used a computer software trick to make the cars seem more environmentally friendly during state emissions tests.

The VW models involved include the diesel versions of the following models: The 2009-15 Volkswagen Jetta, the 2009–15 Beetle, the 2009–15 Golf, the 2014-15 Passat and the 2009-15 Audi A3. The recall affects 482,000 vehicles in total.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance Assurance, in a statement. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air

Resources Board of an investigation related to certain emissions compliance matters," Volkswagen says. "VW is cooperating with the investigation; we are unable to comment further at this time."

Auto Guide:

http://www.autoguide.com/auto-news/2015/09/volkswagen-used-illegal-software-to-cheat-emissions-tests-epa.html

Volkswagen Used Illegal Software to Cheat Emissions Tests: EPA

By Stephen Elmer Sep 18, 2015

Volkswagen may be forced to recall almost 500,000 diesel passenger cars after an investigation revealed illegal software was allowing the vehicles to pass government emissions standards.

A software algorithm, known as a defeat device, used on roughly 482,000 Volkswagen vehicles with four-cylinder diesel engines is able to detect when the car is undergoing official emissions testing, and will activate full emissions controls only during the test.

The EPA says that this results in cars that meet emissions standards while being tested, but emit 40 percent more nitrogen oxides while driving.

Independent analysis at West Virginia University uncovered the defeat devices. After being questioned by the EPA and CARB, Volkswagen admitted that its cars did contain defeat devices.

The EPA says "it is incumbent" on Volkswagen to initiate a recall fix for all the affected cars, although they note that these vehicles are still safe to drive and do not present a safety hazard at this time.

Volkswagen may be liable for civil penalties over the findings, which could total up to $18 billion if the EPA leverages its maximum find of $37,500 per vehicles.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

Models affected by the issue include the 2009-2015 Volkswagen Jetta, Beetle and Gold. The 2009-2015 Audi A3 is also affected, along with the 2014-2015 Passat.

Volkswagen acknowledged that it has received notice of the investigation. "VW is cooperating with the investigation; we are unable to comment further at this time," said the brand.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:36 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Post:

http://www.washingtonpost.com/news/energy-environment/wp/2015/09/18/epa-volkswagen-used-defeat-device-to-circumvent-air-pollution-controls/

EPA: Volkswagen used 'defeat device' to circumvent air pollution controls

By Joby Warrick September 18 at 1:04 PM

The Environmental Protection Agency on Friday accused Volkswagen of installing a software "defeat device" that circumvented pollution controls on nearly a half-million Volkswagens and Audis.

The regulatory agency filed a notice of violation against the German automaker, saying the company deliberately cheated on clean-air rules by installing the software of five of its models since 2008. An EPA statement warned of possible civil penalties and hinted of a future possible recall, saying it was "incumbent on Volkswagen to initiate the process" to fix the affected cars' emissions systems.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the EPA's assistant administrator for EPA's Office of Enforcement and Compliance Assurance.

EPA officials, in a joint probe with California's regulatory agency, determined that Volkswagen had inserted a sophisticated algorithm in the cars' emissions software that could detect when a vehicle was undergoing emissions testing. The software, which the EPA called a "defeat device," would turn on full emissions controls during testing, and switch them off again under normal driving conditions.

As a result, the cars emitted far more pollution–up to 40 times the federal standard for the pollutant known as NOx, a component in urban smog, the EPA said.

The software was installed in Volkwagen's Golfs, Jettas and Beetles and Audi A3s beginning in the model year 2009, and in Volkswagen's Passat models beginning in 2014. EPA officials said no action was required by owners of the car, but they suggested that Volkswagen would be compelled to address the problem.

"Our goal now is to ensure that the affected cars are brought into compliance, said Richard Corey, the executive officer for California's Air Resources Board." He said federal and state agencies intended to "dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:31 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Wall Street Journal:

http://www.wsj.com/articles/epa-accuses-volkswagen-of-dodging-emissions-rules-1442595129

EPA Accuses Volkswagen of Dodging Emissions Rules

Agency says German auto maker circumvented air-pollution standards with software

By AMY HARDER

WASHINGTON—The U.S. Environmental Protection Agency issued a notice on Friday alleging that Volkswagen AG circumvented air-pollution standards with software installed on nearly a half million cars sold in the U.S. since 2008.

Officials said Volkswagen could face penalties of up to $37,500 per vehicle, or a total of more than $18 billion, though it remained unclear whether the government would eventually levy such a large penalty. Officials said the German auto maker violated the federal Clean Air Act.

The agency said that owners of these cars don't need to take any action right now and that while the cars have emissions exceeding federal standards, "these violations do not present a safety hazard and the cars remain legal to drive," according to the EPA.

Officials said a recall hasn't been announced and an investigation continues. They plan to at some point order Volkswagen to fix the vehicles, officials said.

Top EPA officials made the announcement alongside the California Air Resources Board, which is separately investigating the alleged use of the software, which EPA describes as a "defeat device." The software reduces the effectiveness of a car's emission control system during normal driving conditions and enables the car to emit nitrogen oxides at up to 40 times the allowable standard, according to the EPA.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, Assistant Administrator for the Office of Enforcement and Compliance at the EPA.

"Volkswagen Group of America Inc., Volkswagen AG and Audi AG received today notice from the U.S. Environmental Protection Agency, U.S. Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters," Volkswagen said in a statement. "VW is cooperating with the investigation; we are unable to comment further at this time."

EPA said that its allegations cover roughly 482,000 diesel passenger cars with model years between 2009 and 2015 and sold in the U.S. since 2008. They include the following models: the Jetta, Beetle, Audi A3, Golf and Passat.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products meet federal air-pollution standards. EPA said Friday that by making and selling vehicles with the "defeat device" software, Volkswagen was violating two parts of the Clean Air Act.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:19 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

NPR:

http://www.npr.org/sections/thetwo-way/2015/09/18/441467960/volkswagen-used-defeat-device-to-skirt-emissions-rules-epa-says

Volkswagen Used 'Defeat Device' To Skirt Emissions Rules, EPA Says

BILL CHAPPELL

Saying Volkswagen violated the Clean Air Act, the Environmental Protection Agency says the company's diesel-powered cars have sophisticated software that detects emissions testing – and "turns full emissions controls on only during the test."

Installed on four-cylinder cars, the software, which the EPA calls a "defeat device" that's meant to trick official tests, allowed diesel Jettas, Beetles, and other cars to "emit up to 40 times more pollution" than allowed under U.S. emission standards.

The agency says that after the carmaker was confronted with emission test results this month, it admitted that the cars contain defeat devices.

Volkswagen must now fix the cars' emissions control systems, the agency says, adding that Volkswagen could be liable for civil penalties and other punishment. The cars in question are popular Volkswagen and Audi models that were made from 2009 to this year.

The affected diesel cars include:

- Jetta (Model Years 2009 – 2015)
- Beetle (Model Years 2009 – 2015)
- Audi A3 (Model Years 2009 – 2015)
- Golf (Model Years 2009 – 2015)

• Passat (Model Years 2014-2015)

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance.

The Verge:

http://www.theverge.com/2015/9/18/9352757/epa-volkswagen-recall-emissions

Volkswagen ordered to recall 500,000 cars for gaming emissions testing

By Colin Lecher

The federal government has ordered Volkswagen to recall almost 500,000 vehicles, saying the company unlawfully used special software to get around missions regulations.

VOLKSWAGEN ALLEGEDLY USED A "DEFEAT DEVICE."

Volkswagen allegedly used a so-called "defeat device" on certain models made in the past six years. The device works by only turning on emissions control when undergoing emissions testing, but not when the car is actually being driven normally and pollution is at its peak. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," the EPA said in a statement.

Using such a device is a violation of the Clean Air Act, which, as The New York Times points out, the EPA has been increasingly cracking down on. In November, the agency hit Hyundai and Kia with a record $100 million fine for violations under the act.

The cars affected by the recall include the 2009 to 2015 Jetta, Beetle, Golf, and Audi A3. The 2014 and 2015 Passat is also included. According to the EPA, that adds up to 482,000 cars.

Jalopnik:

http://jalopnik.com/epa-orders-volkswagen-to-recall-482-000-diesel-cars-for-1731665972

EPA Orders Volkswagen To Recall 482,000 Diesel Cars For Cheating On Emissions

Patrick George

The New York Times reports Volkswagen has been ordered by the Environmental Protection Agency to recall 482,000 diesel cars in the U.S. over software they say was intentionally designed to circumvent smog regulations.

The cars, all diesels from 2009 to 2015, have a "defeat device" programmed to detect when the car is undergoing official emissions testing that only then turns on the full emissions control systems, the Times reports.

These controls are turned off in other situations, leading to far greater emissions than VW let on — which is against the law. The devices were designed to conceal nitrogen oxide emissions.

It's not immediately clear why VW had such a system on these cars, how the system detected official testing versus normal driving, or if the cars operated differently in normal driving when the defeat device was off. What effect did reducing NOx emissions have on fuel economy or performance?

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

The state of California and the Justice Department are also investigating the violation, the paper reports.

The vehicles affected are the 2009-2015 diesel Jetta, Beetle, Golf, Passat and Audi A3.

More on this as we get it.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 1:10 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit Free Press:

http://www.freep.com/story/money/cars/2015/09/18/epa-volkswagen-used-software-skirt-emissions-rules/72399372/

EPA: Volkswagen used software to skirt emissions rules

By Greg Gardner

The U.S. Environmental Protection Agency and California are accusing Volkswagen of violating the Clean Air Act by using software that allows hundred of thousands of VW and Audi diesel-powered cars to get around emission standards.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for enforcement and compliance assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The agency's notice of violation covers about 482,000 diesel cars sold between 2009 and 2015 model years.

Affected diesel models include:

Jetta (model years 2009 – 2015)

Beetle (model years 2009 – 2015)

Audi A3 (model years 2009 – 2015)

Golf (model years 2009 – 2015)

Passat (model years 2014-2015)

California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board (CARB) have both initiated investigations based on Volkswagen's alleged actions.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said CARB executive officer Richard Corey. "Our goal is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The federal and California regulators say Volkswagen used a sophisticated software algorithm on certain Volkswagen vehicles that detects when the car is undergoing official emissions testing

and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations.

As a result the cars met emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the permissible standard. The software produced by Volkswagen is a "defeat device," as defined by the Clean Air Act.

Corey said testing groups in Europe found information that indicated Volkswagen may have manipulated its emission tests and told California regulators about their suspicions.

NOx pollution contributes to nitrogen dioxide, ground-level ozone and fine particulate matter. Exposure to these pollutants has been linked with a range of serious health effects, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, elderly people and those with pre-existing respiratory disease are particularly at risk for health effects of these pollutants.

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified. By making and selling vehicles with defeat devices that allowed for higher levels of air emissions than were certified to EPA, Volkswagen violated two important provisions of the Clean Air Act.

EPA and CARB uncovered the defeat device software after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization. The researchers raised questions about emissions levels, and the agencies began further investigations into the issue. In September, after EPA and CARB demanded an explanation for the emission problems, Volkswagen admitted that the cars contained defeat devices.

VW may be liable for civil penalties of up to $37,500 per vehicle found to be violating the

standard, or potentially more than $18 billion.

It is incumbent upon Volkswagen to initiate the process that will fix the cars' emissions systems. Car owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time.

Wired:

http://www.wired.com/2015/09/epa-accuses-volkswagen-cheating-emissions-testing-482000-cars/

EPA ACCUSES VOLKSWAGEN OF CHEATING EMISSIONS TESTING ON 482,000 CARS

Alex Davies

THE EPA IS accusing Volkswagen of illegally using software to cheat emissions standards, allowing the German automaker to sell half a million cars that produce smog at 40 times the legal limit.

In a notice of violation of the Clean Air Act sent to Volkswagen AG, Audi AG, and Volkswagen Group of America, Inc today, the EPA said diesel-powered VW cars used a "defeat device," a kind of "a sophisticated software algorithm [that] detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test. The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations."

The accusation applies to 482,000 diesel-powered, four-cyclinder Jetta, Beetle, Audi A3, Golf, and Passat cars sold between 2008 and 2015 in the US. The news comes as the Frankfurt motor show, one of the biggest events of the year for the automaker, opens to the press. VW will be required to fix the problem, at no cost to car owners.

The Week:

http://www.theweek.com/speedreads/578080/epa-catches-volkswagen-blatantly-cheating-smog-tests

EPA catches Volkswagen blatantly cheating on smog tests

Jeva Lange

Almost half a million Volkswagen cars, including recent diesel models of Jettas, Beetles, Audi A3s, Golfs, and Passats, may be recalled in an enormous crackdown on the German carmaker's alleged blatant circumvention of smog standards, The New York Times reports.

The Environmental Protection Agency has demanded that the cars be recalled, and specifically accused Volkswagen of installing software, called a "defeat device," in their cars that basically just lies about what a car's emissions are during tests:

The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said. [The New York Times]

Car emissions contain nitrogen oxide, which creates smog, as well as pollutants that cause asthma.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:56 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert

Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

LA Times:

http://www.latimes.com/business/autos/la-fi-hy-volkswagen-probe-20150918-story.html

Volkswagen is accused of sidestepping emissions rules, 'cheating' pollution tests

By JERRY HIRSCH

Federal and California environmental regulators accused Volkswagen of using software that "cheats" pollution testing in nearly 500,000 recent model VWs and Audis by circumventing emission standards in its diesel cars.

The German automaker will eventually have to recall all of the vehicles and change the emissions systems at its own expense, regulators said. Additionally it could face a fine of about $18 billion, or $35,500 per car, federal environmental officials said.

The Environmental Protection Agency on Friday issued the German automaker a "notice of violation" of the Clean Air Act for both VW models and the company's Audi luxury brand. It covers models equipped with four-cylinder diesel engines. The California Air Resources Board issued a similar letter.

Volkswagen and Audi vehicles from model years 2009-2015 have the software, which uses an algorithm that detects when the vehicle is undergoing pollution tests and changes the way it performs from when it is being driven on the open road.

It "is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "EPA is committed to making sure that all automakers play by the same rules."

"We expected better from VW," Giles said.

Air Resources Board Executive Officer Richard Corey said the California agency wants to bring the cars "into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

Volkswagen said it is cooperating with the investigation.

"We are unable to comment further at this time," the company said in a statement.

The affected diesel models include: Jetta (model years 2009 – 2015,) Beetle (model years 2009 – 2015,) Audi A3 (model years 2009 – 2015,) Golf (model years 2009 – 2015) and Passat (model years 2014-2015.)

International Business Times:

http://www.ibtimes.com/volkswagen-audi-recall-500000-cars-broke-environmental-rules-white-house-says-2104099

Volkswagen And Audi Recall: 500,000 Cars Broke Environmental Rules, White House Says

By Christopher Harress

The Obama administration Friday forced car manufacturer Volkswagen to recall nearly 500,000 cars after it was discovered the German automaker had fitted its vehicles with special technology that can beat environmental tests for reducing smog, according to a new report.

The recall, which was imposed after an investigation by the Environmental Protection Agency, is expected to affect four-cylinder Volkswagen and Audi cars that were manufactured between 2009 and 2015.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance, told the New York Times.

"Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:52 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Detroit News:

http://www.detroitnews.com/story/business/autos/foreign/2015/09/18/epa-vw-diesel-vehicles-violated-emissions-rules/72401296/

EPA: 482K VW diesel vehicles violated emissions rules

David Shepardson

Washington — The Environmental Protection Agency and the state of California said Volkswagen AG violated federal law by allowing 482,000 diesel VW and Audi cars sold since 2009 to evade emissions requirements using sophisticated software.

The announcement is a big setback to the German automaker that has made diesel vehicles a big part of its U.S. strategy. VW could face fines or criminal prosecution and must immediately prevent those vehicles from being able to defeat emissions rules.

VW concealed facts but has now admitted wrongdoing, said Cynthia Giles, assistant administrator for the Office of Enforcement and Compliance Assurance. "We expected better from VW," she said.

The agencies allege that four-cylinder Volkswagen and Audi diesel cars from model years 2009-2015 include software that circumvents EPA emissions standards for certain air pollutants. California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board have initiated investigations based on Volkswagen's alleged actions.

EPA said the vehicles software "detects when the car is undergoing official emissions testing, and turns full emissions controls on only during the test." The vehicles include diesel Golf, Jetta, Sportwagen, Beetle and Audi A3 vehicles built from 2009-2015.

EPA said "the effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations. This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard. The software produced by Volkswagen is a 'defeat device,' as defined by the Clean Air Act."

NOx pollution contributes to nitrogen dioxide, ground-level ozone, and fine particulate matter. EPA said exposure has been linked to serious health issues, including increased asthma attacks and other respiratory illnesses that can be serious enough to send people to the hospital. "Exposure to ozone and particulate matter have also been associated with premature death due to respiratory-related or cardiovascular-related effects. Children, the elderly, and people with pre-existing respiratory disease are particularly at risk for health effects of these pollutants," EPA said.

This is the latest example of automakers not following the miles per gallon and emissions rules.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Giles. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

The Clean Air Act requires vehicle manufacturers to certify to EPA that their products will meet applicable federal emission standards to control air pollution, and every vehicle sold in the U.S. must be covered by an EPA-issued certificate of conformity. Motor vehicles equipped with defeat devices, which reduce the effectiveness of the emission control system during normal driving conditions, cannot be certified.

"Working with U.S. EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," said Air Resources Board Executive Officer Richard Corey. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

The issue first came to the attention of the agencies in 2014 after independent analysis by researchers at West Virginia University, working with the International Council on Clean Transportation, a non-governmental organization, raised questions about emissions levels, and the agencies began further investigations into the issue.

In September, after EPA and CARB demanded an explanation for the identified emission problems, Volkswagen admitted that the cars contained defeat devices, the agencies said.

EPA said VW must recall the vehicles. EPA said "owners should know that although these vehicles have emissions exceeding standards, these violations do not present a safety hazard and the cars remain legal to drive and resell. Owners of cars of these models and years do not need to take any action at this time."

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AP (via ABC News):

http://abcnews.go.com/Politics/trump-candidates-criticize-donald-muslim-comments/story?id=33858500

EPA Says VW Intentionally Violates Clean Air Standards

By MATTHEW DALY, ASSOCIATED PRESS WASHINGTON — Sep 18, 2015, 12:42 PM ET

The Environmental Protection Agency says nearly 500,000 Volkswagen and Audi diesel cars built in the past seven year are intentionally violating clean air standards by using software that evades EPA emissions standards.

The EPA says the cars include a device programmed to detect when the car is undergoing official emissions testing. The cars only turn on full emissions control systems during that testing. The EPA says the controls are turned off during normal driving situations.

The EPA called the company's use of the device illegal and a threat to public health.

The EPA called on VW to fix the cars' emissions systems, but said car owners do not need to take any immediate action.

VW said in a statement it is cooperating with the investigation.

Bloomberg:

http://www.bloomberg.com/news/articles/2015-09-18/epa-says-volkswagon-software-

circumvented-car-emissions-testing

EPA Says Volkswagen Circumvented Car Emissions Tests

Jeff Plungis

Volkswagen AG sold diesel cars with software that circumvented U.S. emissions standards for air pollution, the Environmental Protection Agency said.

The company sold Volkswagen and Audi brand cars from model years 2009-2015 that contained a "sophisticated software algorithm" that detects when the car is undergoing official emissions testing, and turns on full emissions control, the agency said. During normal driving times, the systems don't operate fully, regulators said.

The potential fine is $37,500 per vehicle and 482,000 autos are part of the case, yielding a potential fine of more than $18 billion, Cynthia Giles, EPA assistant administrator for enforcement and compliance, said on a phone call with reporters Friday.

California is also investigating the claims.

Volkswagen said in a statement it is cooperating with the investigation and unable to comment further.

Business Insider:

http://www.businessinsider.com/vw-told-to-recall-500000-cars-after-us-government-accuses-it-of-dodging-clean-air-standards-2015-9

VW told to recall 500,000 cars after US government accuses it of dodging clean air standards

Benjamin Zhang

The Environmental Protection Agency has ordered the recall of 500,000 Volkswagen cars.

According to Coral Davenport of the New York Times, the EPA accused VW of using hidden software — called a "defeat device" — to dodge clean air standard during emissions testing.

“Using a defeat device in cars to evade clean air standards is illegal and a threat to public health,” assistant administrator for the Office of Enforcement and Compliance Assurance said Cynthia Giles said in a statement.

“Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters.”

In response to the recall, Volkswagen issued the following statement to Business Insider.

"Volkswagen Group of America, Inc., Volkswagen AG and Audi AG received today notice from the US Environmental Protection Agency, US Department of Justice and the California Air Resources Board of an investigation related to certain emissions compliance matters. VW is cooperating with the investigation; we are unable to comment further at this time."

The recall affects 482,000 diesel powered cars sold in the US since 2008. They include:

Volkswagen Jetta TDI: 2009-20015

Volkswagen Beetle TDI: 2009-2015

Audi A3 TDI: 2009-2015

Volkswagen Golf TDI: 2009-2015

Volkswagen Passat TDI: 2014-2015

This story is developing. We will update when more information is available.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:42 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Examiner:

http://www.washingtonexaminer.com/epa-says-audi-vw-cheating-on-emissions/article/2572404

EPA says Audi, VW cheating on emissions

By JOHN SICILIANO

The Environmental Protection Agency and California regulators charged automakers Volkswagen and Audi on Friday with purposefully violating emission standards in their line of diesel cars.

EPA accused the automakers of using a device in their vehicles to get around the pollution rules. According to EPA, the device regulates emissions, but only turns on and works while emissions are being tested.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, EPA assistant administrator for the agency's enforcement office. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

Giles said VW was "concealing facts" about the devices. The vehicle models involved include the popular Jetta, Audi A-3, Passat and the iconic Beetle, and in model years 2009-2015. The violations cover 482,000 diesel passenger cars.

The EPA's announcement isn't a final decision, but is a clear sign that the EPA believes it has a case against the automakers, one that could lead to fines as large as $37,000 per vehicle. All together, the combined fines could pile up to $18 billion.

An EPA statement said "California is separately issuing an In-Use Compliance letter to Volkswagen, and EPA and the California Air Resources Board ... have both initiated investigations based on Volkswagen's alleged actions."

"Working with US EPA we are taking this important step to protect public health thanks to the dogged investigations by our laboratory scientists and staff," the California board's CEO Richard Corey said. "Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action."

WPTZ:

http://www.wptz.com/money/epa-accuses-vw-of-cheating-on-emission-rules/35352250

EPA accuses VW of cheating on emission rules

Published 12:29 PM EDT Sep 18, 2015

NEW YORK (CNNMoney) —Diesel cars from Volkswagen and Audi cheated on clean air rules by including software that made the cars look cleaner than they actually were, according to federal and California regulators.

The regulators say that the software on the cars turned up the emission controls only when it could tell that the car was being tested.

"The effectiveness of these vehicles' pollution emissions control devices is greatly reduced during all normal driving situations," said the Environmental Protection Agency's notice to the company. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides at up to 40 times the standard."

There are nearly 500,000 of the diesel cars on U.S. roads. The models include the VW Jetta, the Beetle and the Golf from model years 2009 through 2015, the Passat from 2014-2015 as well as the Audi A3, model years 2009-2015. The luxury brand is owned by Volkswagen.

Owners of the affected cars do not face health risks according to the EPA and can to continue to drive or sell the cars. But the EPA says that VW will be responsible for fixing the problem.

Volkwagen did not immediately respond to a request for comment.

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City AM:

http://www.cityam.com/224676/volkswagen-told-recall-500000-vehicles-over-emissions

Volkswagen told to recall 500,000 vehicles over emissions

by Catherine Neilan

Volkswagen has been ordered to recall nearly half a million cars in the US by the Obama administration, which claims the German car group used software that was purposely designed to dodge environmental standards for reducing smog.

The US government's Environmental Protection Agency issued the company a notice of violation this afternoon, accusing Volkswagen of having installing a "defeat device" into its four-cylinder Volkswagen and Audi vehicles between 2009 and 2015, according to the New York Times.

The device is programmed to detect when the car is undergoing emissions test, during which time it will turn on its full emissions control systems. These controls are reportedly then turned off when the car is driving in "normal" situations, when the cars pollute more heavily than reported by Volkswagen, the EPA claims.

The government agency estimates that 482,000 diesel passenger vehicles are affected.

Volkswagen could not be contacted at the time of publication.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:33 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

Washington Times:

http://www.washingtontimes.com/news/2015/sep/18/epa-volkswagen-used-software-cheat-emissions-tests/

EPA: Volkswagen used 'sophisticated software' to cheat emissions tests

By Ben Wolfgang - The Washington Times - Friday, September 18, 2015

The Obama administration on Friday accused Volkswagen of using a "sophisticated software algorithm" to cheat on emissions testing and mask the fact that some models emit too much harmful pollution.

Some Volkswagen cars from model years 2009 to 2015, the Environmental Protection Agency said, include software that can detect when they're undergoing emissions testing. Full emissions controls were activated only during testing and then automatically shut down during normal operation, the agency charged.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, assistant administrator for the EPA's Office of Enforcement and Compliance Assurance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will continue to investigate these very serious matters."

During normal operation, the "defeat device" allowed Volkswagen cars to emit nitrogen oxides at up to 40 times the federal threshold as laid out in the Clean Air Act.

The EPA has issued "a notice of violation" to the automaker, and the state of California has launched its own investigation into the matter. Volkswagen could face civil penalties for the violations, the agency said.

The allegations apply to about 482,000 diesel passenger cars sold since 2008, including Jettas, Beetles, Audi A3s, Golfs and other models.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:26 PM

To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: RE: Volkswagen Clips 9/18/2015

USA Today:

http://www.usatoday.com/story/money/cars/2015/09/18/epa-accuses-volkswagen-audi-evading-emission-laws/72400018/

EPA accuses Volkswagen, Audi of evading emission laws

Nathan Bomey, USA TODAY 12:12 p.m. EDT September 18, 2015

The German automaker adopted a "defeat device" to trick regulators, the EPA said.

The Environmental Protection Agency on Friday accused Volkswagen of installing software on certain cars in the U.S. to evade federal emission regulations, potentially exposing people to harmful pollutants.

The German automaker adopted what the EPA called a "defeat device" to trick U.S. regulators into believing that its cars met Clean Air Act standards, the federal agency said in a statement.

The agency said 482,000 cars violated federal standards, including four-cylinder Volkswagen cars from 2009-15 and Audi diesel cars from the same period. They included the Volkswagen Jetta, Beetle, Golf and Passat, and the Audi A3.

Volkswagen, whose brands include the luxury Audi lineup, may face fines or other penalties, the EPA said.

The cars are still safe to drive, the EPA said, and owners do not need to take immediate action. But the agency will require Volkswagen to fix the cars for free.

Newsweek:

http://www.newsweek.com/epa-volkswagen-software-cheat-clean-air-rules-373869

EPA: Volkswagen Used Software in Cars to Cheat on Clean Air Rules

BY ZOË SCHLANGER 9/18/15 AT 12:14 PM

A U.S. Environmental Protection Agency investigation has concluded that for years Volkswagen has been installing software in its vehicles that circumvents federal emissions standards for air pollution, the agency announced Friday.

EPA alleges that Volkswagen installed a "sophisticated software algorithm on certain Volkswagen vehicles" that could detect when the car was being tested for emissions. The software would turn full emissions controls on only during the official test. "This results in cars that meet emissions standards in the laboratory or testing station, but during normal operation, emit nitrogen oxides, or NOx, at up to 40 times the standard," EPA said in a press release. They called the software a "defeat device," deliberately installed to evade the Clean Air Act standards.

This "defeat device" was found in several car models, from 2009 models up to 2015 models, according to EPA:

Jetta (Model Years 2009 – 2015)

Beetle (Model Years 2009 – 2015)

Audi A3 (Model Years 2009 – 2015)

Golf (Model Years 2009 – 2015)

Passat (Model Years 2014-2015)

In total, this includes about 482,000 passenger cars.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," Cynthia Giles, EPA's Assistant Administrator for the Office of Enforcement and Compliance Assurance, said in a statement emailed Friday. The agency worked with California regulators to investigate the automobile manufacturer and issue a notice of violation.

"Our goal now is to ensure that the affected cars are brought into compliance, to dig more deeply into the extent and implications of Volkswagen's efforts to cheat on clean air rules, and to take appropriate further action," California Air Resources Board Executive Officer Richard Corey said in the statement.

Volkswagen has yet to respond publicly to the EPA allegations. Newsweek has reached out to the company for comment, and we will update if they respond.

From: Gong, Kristiene
Sent: Friday, September 18, 2015 12:20 PM
To: Purchia, Liz; Allen, Laura; Abrams, Dan; Reynolds, Thomas; Conger, Nick; Senn, John; Millett, John; Birgfeld, Erin; Hull, George; Daguillard, Robert
Cc: Smith, Roxanne
Subject: Volkswagen Clips 9/18/2015

NY Times:

http://www.nytimes.com/2015/09/19/business/volkswagen-is-ordered-to-recall-nearly-500000-vehicles-over-emissions-software.html?_r=0

Volkswagen Is Ordered to Recall Nearly 500,000 Vehicles Over Emissions Software

By CORAL DAVENPORT SEPT. 18, 2015

WASHINGTON — The Obama administration on Friday ordered Volkswagen to recall nearly a half million cars from the road, saying the German automaker used software intentionally designed to circumvent environmental standards for reducing smog.

The Environmental Protection Agency issued the company a notice of violation and accused the company of breaking the law by installing software known as a "defeat device" in 4-cylinder Volkswagen and Audi vehicles from model years 2009-15. The device is programmed to detect when the car is undergoing official emissions testing, and to only turn on full emissions control systems during that testing. Those controls are turned off during normal driving situations, when the vehicles pollute far more heavily than reported by the manufacturer, the E.P.A. said.

"Using a defeat device in cars to evade clean air standards is illegal and a threat to public health," said Cynthia Giles, the E.P.A.'s assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, E.P.A. is committed to making sure that all automakers play by the same rules. E.P.A. will continue to investigate these very serious violations."

The software was designed to conceal the cars' emissions of the pollutant nitrogen oxide, which contributes to the creation of ozone and smog. The pollutants are linked to a range of health problems, including asthma attacks and other respiratory diseases.

The state of California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

The allegations cover roughly 482,000 diesel passenger cars sold in the United States since 2009.

Affected diesel models include the Volkswagen Jetta (model years 2009-15), Volkswagen Beetle (model years 2009–15), Audi A3 (model years 2009–15), Volkswagen Golf (model years 2009–15) and Volkswagen Passat (model years 2014-15).

The notice of violation is part of a broader, more aggressive enforcement effort by federal environmental regulators on the auto industry. Analysts said it was meant to send a clear message to automakers that they will be harshly treated for compromising federal rules.

It follows a November 2014 announcement of the administration's largest-ever penalty for a violation of the Clean Air Act, in which the government fined the Korean automakers Hyundai Motor and Kia Motors a combined $300 million as part of a settlement for overstating vehicle fuel-economy standards on 1.2 million cars.

"They want to make it clear that they're going to crack down on cheaters," said Frank O'Donnell, president of the environmental advocacy group Clean Air Watch. "They're cheating not only car buyers but the breathing public. They want to lay down the law, enforce the law, and show they're not going to tolerate cheaters. The laws and regulation are only as good as the enforcement."

The software was designed to conceal the cars' emissions of the pollutant nitrogen oxide, which contributes to the creation of ozone and smog. The pollutants are linked to a range of health problems, including asthma attacks and other respiratory diseases.

The state of California has issued a separate notice of violation to the company. California, the E.P.A. and the Justice Department are working together on an investigation of the allegations.

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It follows a November 2014 announcement of the administration's largest-ever penalty for a violation of the Clean Air Act, in which the government fined the Korean automakers Hyundai Motor and Kia Motors a combined $300 million as part of a settlement for overstating vehicle fuel-economy standards on 1.2 million cars.

"They want to make it clear that they're going to crack down on cheaters," said Frank O'Donnell, president of the environmental advocacy group Clean Air Watch. "They're cheating not only car buyers but the breathing public. They want to lay down the law, enforce the law, and show they're not going to tolerate cheaters. The laws and regulation are only as good as the enforcement."

To: Grundler, Christopher[grundler.christopher@epa.gov]; Charmley, William[charmley.william@epa.gov]; Snapp, Lisa[snapp.lisa@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Simon, Karl
Sent: Tue 9/22/2015 2:43:11 PM
Subject: and off we go...

Apple Targets Electric-Car Shipping Date for 2019

Consumer-electronics maker accelerates efforts to build Apple-branded car

Apple's initial venture into automobiles, its CarPlay software for integrating smartphones, has morphed into a full-fledged effort to build electric cars and finalize a product by 2019. Photo: Jae C. Hong/Associated Press

By

Daisuke Wakabayashi

•

Daisuke Wakabayashi

The Wall Street Journal

CANCEL

- BiographyDaisuke Wakabayashi
- @daiwaka
- daichan
- Google+
- Daisuke.Wakabayashi@wsj.com

Sept. 21, 2015 1:38 p.m. ET

Apple Inc. **AAPL -1.39 %** is accelerating efforts to build an electric car, designating it internally as a "committed project" and setting a target ship date for 2019, according to people familiar with the matter.

The go-ahead came after the company spent more than a year investigating the feasibility of an Apple-branded car, including meetings with two groups of government officials in California. Leaders of the project, code-named Titan **EQTITAN 0.63 %**, have been given permission to triple the 600-person team, the people familiar with the matter said.

Apple has hired experts in driverless cars, but the people familiar with Apple's plans said the Cupertino, Calif., company doesn't currently plan to make its first electric vehicle fully autonomous. That capability is part of the product's long-term plans, the people familiar with the matter said.

Apple's commitment is a sign that the company sees an opportunity to become a player in the automotive industry by applying expertise that it has honed in developing iPhones—in areas such as batteries, sensors and hardware-software integration—to the next generation of cars.

Related News

- Apple Hires Auto Industry Veterans
- What Apple's Auto Ambitions Mean for Tesla
- Apple's Jeff Williams: 'The Car Is the Ultimate Mobile Device'
- Auto Makers Gear Up to Take on Challenge From Google and Apple
- Apple, A123 Strike Deal in Employee Poaching Lawsuit
- Apple's China Apps Hacked
- Pope's Visit May Crimp iPhone Deliveries

An Apple spokesman declined to comment.

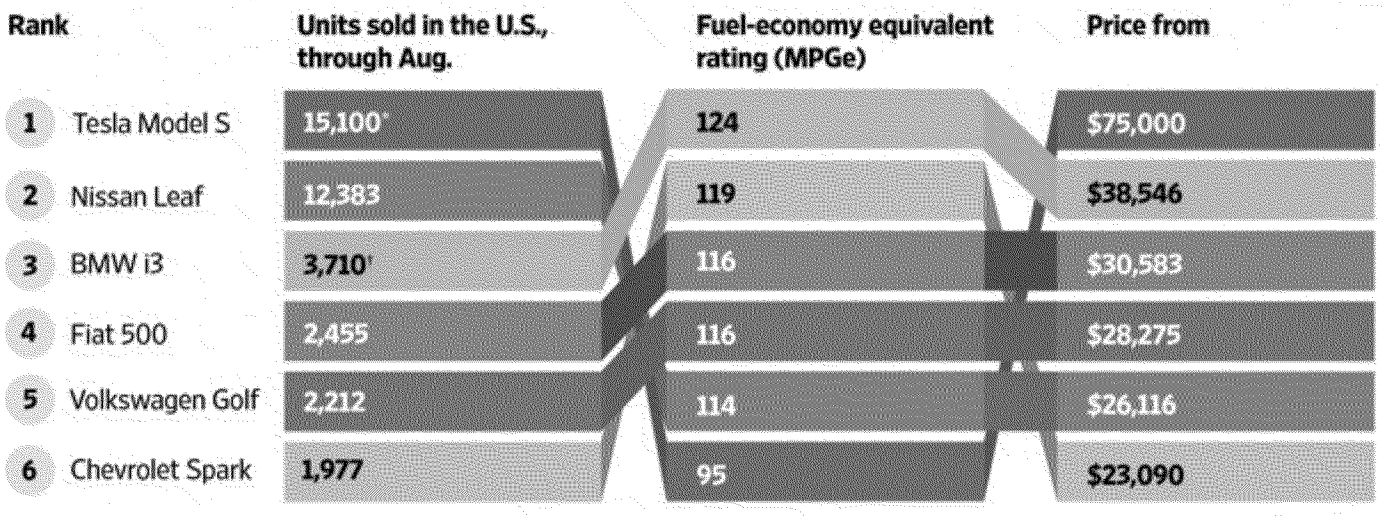
Advertisement

There are many unanswered questions about Apple's automotive foray. It isn't clear whether Apple has a manufacturing partner to become the car equivalent of Hon Hai Precision Industry Co., the Taiwanese contract manufacturer that builds most iPhones and is known by the trade name Foxconn. Most major auto makers build and run their own factories, but that hasn't been Apple's strategy with iPhones or iPads. Contract manufacturing in the auto industry usually is limited to a few niche models.

The 2019 target is ambitious. Building a car is a complex endeavor, even more so for a company without any experience. Once Apple completes its designs and prototypes, a vehicle would still need to undergo a litany of tests before it could clear regulatory hurdles.

Gauging the Industry

Apple is building up efforts to join the electric-car market, which hasn't seen tremendous sales in the U.S.



Note: Prices do not reflect government incentives.
*Tesla sales are estimated. †BMW i3 sales are estimated to not include the extended-range variant.
Sources: LMC Automotive (units sold); Kelley Blue Book (rating and price); Tesla (Tesla price)

THE WALL STREET JOURNAL.

In Apple's parlance, a "ship date" doesn't necessarily mean the date that customers receive a new product; it can also mean the date that engineers sign off on the product's main features.

It isn't uncommon for a project of this size and complexity to miss ship-date deadlines. People familiar with the project said there is skepticism within the team that the 2019 target is achievable.

The global market for electric cars has been weak because of low gas prices and concerns about vehicle price and battery range. To date, Tesla Motors Inc. and Nissan Motor Co. sell two of the best-known and highest-volume battery-powered vehicles, but volumes are only a sliver of the industry's 85 million annual vehicle sales.

Emissions standards are tightening around the world, however, leading most major car companies to invest billions of dollars in plans to launch electric cars between now and the end of the decade. By the time an Apple car would make its debut, brands spanning General Motors Co.'s Chevrolet to Volkswagen AG's Audi and Porsche will have long-range electric vehicles aimed at the mass market.

Earlier this year, The Wall Street Journal reported that Apple had several hundred people investigating an electric vehicle with an initial design resembling a minivan.

'We look at a number of things along the way, and we decided to really put our energies in a few of them.'

—Tim Cook, Apple's CEO

Apple has ramped up hiring since then, pulling in veterans from the auto industry as well as battery and machine-vision experts. People inside Apple said employees from across the company have been reassigned to Titan, similar to how Apple assembled a team for the Apple Watch.

Those involved include DJ Novotney, an Apple veteran with a history of successfully shipping products. Mr. Novotney, one of the first hires to the program last year, is a vice president of program management, overseeing a growing team of managers who coordinate activities among various teams. He didn't respond to a request for comment.

Asked last week by late-night talk-show host Stephen Colbert about Apple's interest in a driverless car, Apple Chief Executive Tim Cook said: "We look at a number of things along the way, and we decide to really put our energies in a few of them."

Gene Munster, an equity analyst with Piper Jaffray, in a Sept. 1 research note estimated Apple's chances of making a car at between 50% and 60%. He said he expects any Apple car to have three distinctive features: a unique design; the ability to work with other Apple devices; and some autonomous capability.

As Apple pushes forward, the company is finding it difficult to keep its automobile interest under wraps.

In May, Apple employees met with officials from GoMentum Station, a 5,000-acre former Navy weapons station east of San Francisco that is now a secure testing facility for autonomous and connected vehicles. In emails obtained by The Wall Street Journal through a public-records request, Apple expressed interest in scheduling time at the facility.

Then in August, an Apple lawyer met with officials from California's Department of Motor Vehicles. In an email, the DMV said the meeting with Apple focused on "the autonomous-vehicle testing regulations that went into effect in September of 2014."

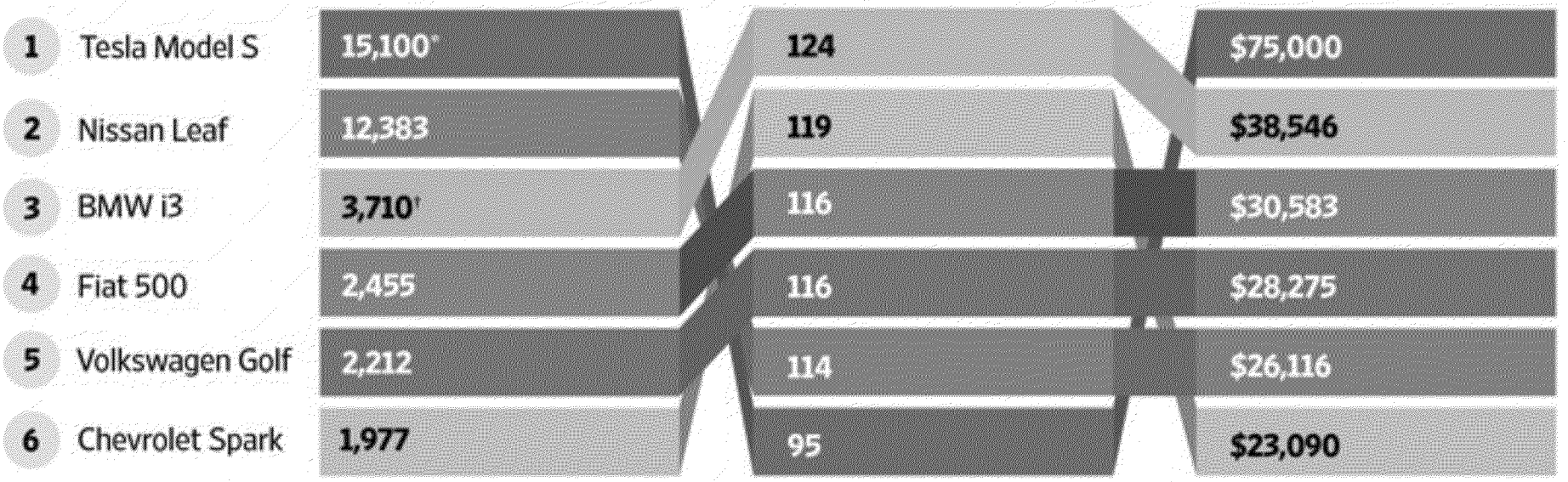
Both meetings were earlier reported by the Guardian.

Updated profiles of recent Apple hires on LinkedIn, the professional social network, provide other hints. They include, for example, an engineer who specializes in automobile chassis.

Driving Innovation in Clean Transportation

Gauging the Industry

Apple is building up efforts to join the electric-car market, which hasn't seen tremendous sales in the U.S.



Note: Prices do not reflect government incentives.

*Tesla sales are estimated. †BMW i3 sales are estimated to not include the extended-range variant.

Sources: LMC Automotive (units sold); Kelley Blue Book (rating and price); Tesla (Tesla price)

THE WALL STREET JOURNAL.

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 2:47:52 PM
Subject: VW to dismiss CEO over emissions cheating scandal
MAIL_CONVERSATION_TOPIC: VW to dismiss CEO over emissions cheating scandal
Created: Fri 3/18/2016 6:18:20 PM

Volkswagen will dismiss Chief Executive Martin Winterkorn, a German newspaper said on Tuesday, after the carmaker admitted to cheating U.S. vehicles emissions tests and said 11 million of its cars could be affected worldwide.

View article...

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 2:48:06 PM
Subject: VW reveals 2016 Passat sedan in the midst of emissions scandal
MAIL_CONVERSATION_TOPIC: VW reveals 2016 Passat sedan in the midst of emissions scandal
Created: Fri 3/18/2016 6:18:19 PM

View article...

To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Cohen, Janet[cohen.janet@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 2:53:47 PM
Subject: FW: Media Call regarding Volkswagen

Hi Byron,

We have an inquiry asking how the AA lab played a role in the VW investigation. Can you help me develop a short statement?

Thank you!

-Erin

From: Singer, Joshua
Sent: Tuesday, September 22, 2015 10:50 AM
To: Millett, John
Cc: Birgfeld, Erin; Kelley, Jeff
Subject: Media Call regarding Volkswagen

John,

We received a voice mail from Guy Gordon, news anchor with WDIV TV in Detroit.

Mr. Gordon asked: Did the Ann Arbor lab play any role in the VW investigation? Will the lab be doing any follow-up investigation on other diesel engines?

Will you please respond to Mr. Gordon? You were listed as the contact for press inquiries in the

email Lee Cook sent last week.

Thank you.

Josh Singer

U.S. EPA, Region 5

phone: 312-353-5069

singer.joshua@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Shepardson, David
Sent: Tue 9/22/2015 2:56:30 PM
Subject: Question

EPA Administrator Gina McCarthy told WSJ forum that EPA is "upping its game" to respond to VW cheating.

Can you elaborate on whether this means new testing?

David Shepardson
Detroit News Washington Bureau Chief
529 14th Street NW Suite 969
Washington, DC 20045
(202) 662-8735 (phone)
(202) 365-8210 (mobile)
twitter.com/davidshepardson

To: Phillips, Anna[Phillips.Anna@epa.gov]
From: .WASH WI-2 Weber, Michael
Sent: Tue 9/22/2015 3:02:00 PM
Subject: Meeting request Christian Hey German Advisory Council on the Environment
removed.txt

Dear Anna,

Thanks again for the help re Volkswagen. I am now writing to you on a more positive matter. Christian Hey, general secretary of the German Advisory Council on the Environment (SRU) (http://www.umweltrat.de/EN/TheGermanAdvisoryCouncilOnTheEnvironment/thegermanadvisorycouncilonthe , an expert advisory body of the German Environment Agency (UBA) and the Federal Ministry of the Environment, will be in town next week (Sept 30). The SRU consists of government employees (Christian Hey is employed by the UBA) and appointed university professors who describe and assess environmental conditions, problems, and political trends and point out solutions and preventive measures. The SRU also submits an Environmental Report to the German federal government every four years. The report describes and assesses environmental policy developments and provides in-depth analyses of selected topics. Christian Hey is very interested in some comments your colleague William Jordan, deputy director in the office of pesticide programs, made recently on TTIP (see press article below). Do you think he would be available for a meeting? I am also wondering if Scot Hagerthey or one of his staff that worked on the ROE is interested to talk to Christian Hey about some of the environmental challenges they regard most pressing or they think are not so much on the public radar but warrant attention.

I've worked with Christian for a few years in one of my previous jobs in Berlin and can say that he is extremely knowledgeable on a wide range of topics.

Many thanks,

Michael

Michael Weber

Energy Policy Advisor

Embassy of the Federal Republic of Germany

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Fax: +1 (202) 298 4391

E-mail: wi-2@wash.diplo.de

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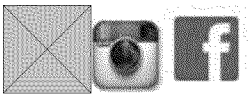


Inside U.S. Trade - 06/27/2014

EPA, Consumer Safety Regulator Express Skepticism About TTIP Benefits

Posted: June 26, 2014

Representatives of two U.S. regulatory agencies on June 24 expressed varying degrees of skepticism toward the idea of expanded regulatory cooperation with the European Union under a U.S.-EU trade deal, and raised fears that an agreement could slow down their rule making.

Robert Adler, acting chair of the U.S. Consumer Product Safety Commission (CPSC), said he worries including regulatory cooperation obligations in the Transatlantic Trade and Investment Partnership (TTIP) could make his

agency even more hamstrung than it already is when it comes to issuing regulations.

Adler directly rebuffed the idea -- proposed by the European Commission -- that the trade deal should establish a new "Regulatory Cooperation Council" that would allow greater input from EU regulators and stakeholders in the U.S. regulatory process, and vice-versa.

Imposing such a procedure "could extend an incredibly cumbersome process that we face when we write regulations," Adler said. He explained that in 1981, Congress amended the CPSC's statute to require extensive cost-benefit analyses before publishing a rule. The consequence is that the agency has been able to issue only nine safety standards in the intervening 33 years, he said.

"The idea that we would then have to take a rule that we have spent so much time writing and go to an additional approval means that you're going to have many, many, many years of waiting for safety regulation. And I think that we all know that safety delayed is safety denied in too many respects," he said at an event in Washington hosted by the Transatlantic Consumer Dialogue (TACD).

Adler said some of his office's expert-level officials have been directly involved in the TTIP negotiations, and have helped to explain -- for example -- U.S. rules on flame-retardant treatments for textiles. He said the EU seemed satisfied enough with the explanation so as not to regard these rules as a trade barrier to be tackled through TTIP. But he expressed fear that other CPSC regulations may come into the crosshairs of negotiators.

Separately, William Jordan, deputy director in the office of pesticide programs at the Environmental Protection Agency (EPA), signaled skepticism toward TTIP regulatory cooperation efforts by saying it remains to be seen whether they will be "productive or a big waste of time."

Speaking on a different panel at the same TACD event, Jordan also acknowledged evaluating the potential impact of a rule on trans-Atlantic trade would add to a pile of more than a dozen assessments the EPA must conduct for other areas in publishing a rule, potentially slowing it down further.

"The fact that there may be trade impacts from a regulatory decision doesn't necessarily mean that it changes the regulatory decision, but it might mean that you look for different ways of achieving or implementing a goal," Jordan said.

"The downside that I see is adding yet one more kind of analysis to develop when taking a regulatory action … There are usually about 17 sections that go at the end of every rule making the EPA does. To go to another one adds just a little bit more work and has the potential to slow things down. I think the serious question is: Is it worth it?"

At the same time, Jordan said he sees some possible benefits from cooperating with the EU through its proposed Regulatory Cooperation Council.

He suggested doing so would be somewhat helpful, if only so U.S. officials could go to one forum and have access to all the relevant EU officials on a topic -- something he described as difficult given the EU's complicated bureaucracy. Working together on risk assessment for pesticides, for example, might also reduce the likelihood the U.S and EU would come to different decisions on risk management.

Adler, the acting CPSC chair, also raised questions about whether reducing regulatory differencesbetween the U.S. and EU in the consumer products sector, which includes things like apparel and toys, would really lead to added economic gains for businesses on either side of the Atlantic.

He said his experience has shown companies typically make their products to the highest standard of the markets they sell to, so they are compliant in all of them -- something he contended is good for consumers, and does not incur the expense of maintaining different inventories for different safety standards.

"I think the annoyance factor of different safety systems is huge with our friends in the business community. I personally remain skeptical that the out-of-pocket costs are as great as the annoyance," he said.

Adler added his agency does not have the staff or resources to figure out how standards could be aligned with

regulations in other jurisdictions, although it does take international standards and best practices into account. He said he has exhorted businesses who complain about divergent rules to submit detailed petitions demonstrating the two approaches are consistent and harmonizing them would reduce costs. But he said he has received no response to date from businesses.

"What our friends really seem to want is for CPSC to survey the market, find equivalent standards, and lead the charge to make our systems compatible," he said. "In other words, they want us to be the moving party. And I'm going to be very frank: That's not going to happen."

Inside U.S. Trade - 06/27/2014, Vol. 32, No. 26

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 3:11:28 PM
Subject: Fwd: Question

U want me to reply?

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

Begin forwarded message:

From: "Shepardson, David" <DShepardson@detroitnews.com>
Date: September 22, 2015 at 10:56:30 AM EDT
To: Christopher Grundler <grundler.christopher@epa.gov>
Subject: Question

EPA Administrator Gina McCarthy told WSJ forum that EPA is "upping its game" to respond to VW cheating.

Can you elaborate on whether this means new testing?

David Shepardson
Detroit News Washington Bureau Chief
529 14th Street NW Suite 969
Washington, DC 20045
(202) 662-8735 (phone)
(202) 365-8210 (mobile)
twitter.com/davidshepardson

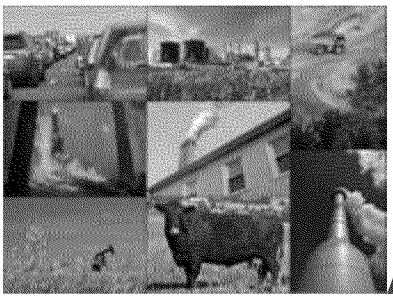
From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 3:18:02 PM
Subject: U.S. taxpayers gave $51M in subsidies for 'clean' VW vehicles
MAIL_CONVERSATION_TOPIC: U.S. taxpayers gave $51M in subsidies for 'clean' VW vehicles
Created: Fri 3/18/2016 6:18:19 PM

The federal government paid out as much as $51 million in green car subsidies for Volkswagen diesel vehicles based on falsified pollution test results, according to a Times analysis of the federal incentives.

View article...

To: Allnutt, David[Allnutt.David@epa.gov]; Anderson, Lea[anderson.lea@epa.gov]; Anderson, Steve[Anderson.Steve@epa.gov]; Aranda, Amber[aranda.amber@epa.gov]; Averback, Jonathan[Averback.Jonathan@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Bianco, Karen[Bianco.Karen@epa.gov]; Bogoshian, Matthew[Bogoshian.Matt@epa.gov]; Branning, Amy[Branning.Amy@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Chapman, Apple[Chapman.Apple@epa.gov]; Choi, Jake[Choi.Jake@epa.gov]; Cozad, David[Cozad.David@epa.gov]; Crum, Lynda[Crum.Lynda@epa.gov]; Crystal, Roy[crystal.roy@epa.gov]; Davis, Julian[davis.julian@epa.gov]; Dickinson, David[Dickinson.David@epa.gov]; Dierker, Carl[Dierker.Carl@epa.gov]; Dolph, Becky[Dolph.Becky@epa.gov]; Doster, Brian[Doster.Brian@epa.gov]; Dubey, Susmita[dubey.susmita@epa.gov]; Dubois, Roland[Dubois.Roland@epa.gov]; Frey, Bert[frey.bertram@epa.gov]; Froikin, Sara[Froikin.Sara@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Graham, Cheryl[Graham.Cheryl@epa.gov]; Harrison, Ben[Harrison.Ben@epa.gov]; Hoffman, Howard[hoffman.howard@epa.gov]; Hogan, Stephanie[Hogan.Stephanie@epa.gov]; Holmes, Carol[Holmes.Carol@epa.gov]; Igoe, Sheila[Igoe.Sheila@epa.gov]; Jordan, Scott[Jordan.Scott@epa.gov]; Kaplan, Robert[kaplan.robert@epa.gov]; Kataoka, Mark[Kataoka.Mark@epa.gov]; Klepp, Robert[Klepp.Robert@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Lee, Michael[lee.michaelg@epa.gov]; Lovett, Lauren[Lovett.Lauren@epa.gov]; Mackey, Cyndy[Mackey.Cyndy@epa.gov]; Manners, Mary[manners.mary@epa.gov]; Marks, Matthew[Marks.Matthew@epa.gov]; Matthews, Julie[Matthews.Juliane@epa.gov]; McConkey, Diane[Mcconkey.Diane@epa.gov]; Mclean, Kevin[Mclean.Kevin@epa.gov]; Moore, Bruce[Moore.Bruce@epa.gov]; Morgan, Jeanette[Morgan.Jeanette@epa.gov]; Moyer, Robert[Moyer.Robert@epa.gov]; Muller, Sheldon[Muller.Sheldon@epa.gov]; Niebling, William[Niebling.William@epa.gov]; Nguyen, Quoc[Nguyen.Quoc@epa.gov]; Adair, Jocelyn[Adair.Jocelyn@epa.gov]; Odendahl, Steve[Odendahl.Steve@epa.gov]; Okoye, Winifred[Okoye.Winifred@epa.gov]; Orlin, David[Orlin.David@epa.gov]; Pastorkovich, Anne-Marie[Pastorkovich.Anne-Marie@epa.gov]; Roberts, Martha[Roberts.Martha@epa.gov]; Rodman, Sonja[Rodman.Sonja@epa.gov]; Rowland, John[Rowland.John@epa.gov]; Schaaf, Eric[Schaaf.Eric@epa.gov]; Schmidt, Lorie[Schmidt.Lorie@epa.gov]; Senn, John[Senn.John@epa.gov]; Shenkman, Ethan[Shenkman.Ethan@epa.gov]; Silverman, Steven[silverman.steven@epa.gov]; Smith, Kristi[Smith.Kristi@epa.gov]; Snyder, Doug[Snyder.Doug@epa.gov]; Srinivasan, Gautam[Srinivasan.Gautam@epa.gov]; Stahle, Susan[Stahle.Susan@epa.gov]; Starfield, Lawrence[Starfield.Lawrence@epa.gov]; Stern, Allyn[Stern.Allyn@epa.gov]; Tate, Ragan[Tate.Ragan@epa.gov]; Thrift, Mike[thrift.mike@epa.gov]; Tierney, Jan[tierney.jan@epa.gov]; Ting, Kaytrue[Ting.Kaytrue@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Versace, Paul[Versace.Paul@epa.gov]; Vetter, Rick[Vetter.Rick@epa.gov]; Walker, Mike[Walker.Mike@epa.gov]; Ward, W. Robert[Ward.Robert@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Wilcox, Geoffrey[wilcox.geoffrey@epa.gov]; Williams, Brent[Williams.Brent@epa.gov]; Williams, Melina[Williams.Melina@epa.gov]; Williamson, Timothy[Williamson.Tim@epa.gov]; Zenick, Elliott[Zenick.Elliott@epa.gov]; Wills, Jennifer[Wills.Jennifer@epa.gov]; Conger, Nick[Conger.Nick@epa.gov]; Blake, Wendy[Blake.Wendy@epa.gov]; Schramm, Daniel[Schramm.Daniel@epa.gov]; Vergeront, Julie[Vergeront.Julie@epa.gov]; Tozzi, Lauren[Tozzi.Lauren@epa.gov]; Coursen, David[Coursen.David@epa.gov]; Pilchen, Zach[Pilchen.Zach@epa.gov]; Skinner-Thompson, Jonathan[Skinner-Thompson.Jonathan@epa.gov]; Vijayan, Abi[Vijayan.Abi@epa.gov]; Roder, Aileen[Roder.Aileen@epa.gov]; Walker, Denise[Walker.Denise@epa.gov]; Caballero, Kathryn[Caballero.Kathryn@epa.gov]; Thompson, Christopher[Thompson.Christopher@epa.gov]; Williams, Christopher[Williams.Christopher@epa.gov]; Matthew, Dayna[Matthew.Dayna@epa.gov]; Reid, Lauren[Reid.Lauren@epa.gov]; Sweet, Andrew[Sweet.Andrew@epa.gov]; Hammons, Jeffrey[Hammons.Jeffrey@epa.gov]; Morris, Rachel[Morris.Rachel@epa.gov]; Nguyen, DucH[Nguyen.DucH@epa.gov]; Jordan, Deborah[Jordan.Deborah@epa.gov]; Charlton, Tom[Charlton.Tom@epa.gov]; Kulschinsky, Edward[Kulschinsky.Edward@epa.gov]; Portmess, Jessica[Portmess.Jessica@epa.gov]; kaminer, joan[Kaminer.Joan@epa.gov]
From: Turley, Jennifer
Sent: Tue 9/22/2015 3:29:46 PM

Subject: Air & Radiation Law News for September 22, 2015



Air & Radiation Law News

for September 22, 2015

Bloomberg BNA Daily Environment Report™

Air Pollution

Clean-Air Group Uncovered VW's Emissions Cheating

The Volkswagens were spewing harmful exhaust when testers drove them on the road. In the lab, they were fine....

Air Pollution

EPA to Act on Utah Pollution Plan by March 31, 2016

The Environmental Protection Agency is taking comment on a proposed consent decree that would require the agency by March 31, 2016, to either approve a revised state pollution plan or promulgate a federal plan to address regional haze in Utah....

Air Pollution

EU Nations Must Update Pollution Monitoring

European Union countries must upgrade their procedures for measuring air pollution in line with a European Commission directive that entered into force Sept. 17. The directive amends the annexes of the EU Ambient Air Quality Directive (2008/50/EC),...

Air Pollution

Volkswagen Target of Criminal Probe on Emissions Tests

The U.S. Justice Department is conducting a criminal investigation of Volkswagen AG's admission to cheating on federal air pollution tests, according to two U.S. officials familiar with the inquiry....

Climate Change

OECD Says Big Economies Still Subsidizing Fossil Fuels

As wealthy countries look for ways to come up with $100 billion a year to fund climate finance for developing countries by 2020, they could find some of the money by ending fossil fuel subsidies that many countries still have in their budgets,...

Climate Change

One Year After Call Issued, Carbon Pricing Takes Off

One year after two prominent international institutions issued a call for carbon pricing, businesses and governments have responded—in a big way....

Climate Change

Pacific Islanders Plead for Climate Action as Seas Rise

The village where Anote Tong attended school some 40 years ago is no longer there. As the Pacific Ocean encroached on the settlement, the villagers left for higher ground....

Climate Policy

Carbon Tax Needs to Shield Poor Families, Report Says

A federal tax on carbon pollution still remains the most economically efficient way to cut carbon dioxide emissions, but the tax would need to be offset with rebates to the poor to shield them from being pushed deeper into poverty, the group Resources...

Climate Policy

Washington State Announces Plan to Cap Carbon Emissions

Washington businesses annually emitting more than 100,000 metric tons of carbon dioxide-equivalent—foundries like Alcoa Inc. and refineries like BP Plc, Shell, Phillips 66 Co. and Tesoro Corp.—will face a new regulation...

Climate Regulation

Oklahoma Drops Clean Power Plan Lawsuit in 10th Circuit

Oklahoma is voluntarily withdrawing a legal challenge to the Environmental Protection Agency's Clean Power Plan that was pending in the U.S. Court of Appeals for the 10th Circuit (Oklahoma v. McCarthy, 10th Cir., No. 15-5066, 9/18/15)....

Coal Mining

WildEarth Files Lawsuit Over Western Coal Mine Approvals

An environmental group has sued the Interior Department for approving four proposed coal mine expansions in Western states (WildEarth Guardians v. Jewell, D. Colo., No. 15-CV-2026, 9/15/15)....

Courts

Impact of Repose Law on Latent Cancer Claims Debated

Federal courts have wrongly interpreted a North Carolina statute as barring latent cancer claims stemming from environmental contamination, lawyers for cancer-stricken plaintiffs told the Fourth Circuit Sept. 17 (Stahle v. CTS Corp.,...

Energy

Moniz Focuses on Clean Energy Progress With India

Energy Secretary Ernest Moniz highlighted the progress made between the U.S. and India in advancing clean energy technologies and integrating renewable energy resources in India. ...

Energy

NRG's GreenCo Plan Echoes Clean-Power Shift in Germany

NRG Energy Inc.'s decision to create a new unit for renewable energy operations should look familiar to anyone who's been watching the utility industry in Europe....

Energy

Senate Democrats to Release Minority Energy Bill

Senate Minority Leader Harry Reid (D-Nev.), Sen. Chuck Schumer (D-N.Y.) and other Senate Democrats will unveil a minority energy bill on Sept. 22 that focuses on clean energy, Democrats on the Energy and Natural Resources Committee announced....

Energy

State Policy, Utilities Ignite Community Solar Growth

The community solar market is heating up thanks to favorable state legislation and interest from utilities in installing solar panels that provide cost-sharing among consumers who don't have access to rooftop solar. ...

Energy

U.K. Commits $3 Billion for First Nuclear Plant in 20 Years

The British government has committed to provide 2 billion pounds ($3 billion) in state support toward the first nuclear power plant to be built in the U.K. in 20 years....

EPA

EPA Defends Hiring Wave Amid Senate Interest

The Environmental Protection Agency defended its staff hiring practices Sept. 21 amid criticism from Senate Republicans that the agency was hiring waves of new employees to improve its position as Congress considers how to fund the agency...

Hazmat Transport

Focus Enforcement on Foreign Battery Makers, U.S. Told

The federal government should go after foreign companies mislabeling products that are likely to catch fire, rather than strengthening existing rules, battery manufacturers told the Transportation Department in the lead-up to an international...

International Climate

Merkel's Climate Crusading Put at Risk by VW Scandal

German Chancellor Angela Merkel's lectures on environmental responsibility may ring a little hollow as she heads to New York....

Oil & Gas

OMB Gets BLM Proposal to Cut Gas Flaring, Venting

A proposed rule to reduce the amount of flaring and venting of natural gas from oil and gas wells on federal and Indian lands has been sent to the White House Office of Management and Budget for interagency review....

Renewable Energy

Solar Installations in New York City Double Since 2013

Solar power installations in New York City have more than doubled since the end of 2013, advancing progress on the city's drive to use solar and other energy technologies to reduce greenhouse gas emissions, Mayor Bill de Blasio (D) announced...

Renewable Energy

SunEdison's Yieldco Overreach Worries Solar Companies

When SunEdison Inc. Chief Executive Officer Ahmad Chatila sold shares in his second power-plant holding company to the public in July, he already suspected the offering might not draw enough investors....

INSIDEEPA.COM
an online news service from the publishers of Inside EPA

Inside EPA's **Risk Policy Report,** 09/22/2015

http://insideepa.com/newsletters/risk-policy-report

Latest News

Senate Republicans Urge EPA To Pull Back From Accelerated Hiring Effort

Senate Republicans are urging EPA to pull back from its plan to complete almost 500 new staffing hires before fiscal year 2015 expires at the end of September and a possible employee level cap looms in FY16, warning that the move to rapidly increase the agency's employee level lacks justification and could lead to a flawed hiring process.

ECOS Eyes Help For States Adopting EPA Rules, Avoids Policy Statements

The Environmental Council of the States' (ECOS) new president says the group is ramping up its focus on how to help states assess the impacts of increasingly complex EPA regulations on a state-by-state basis rather than trying to reach consensus among ECOS' many members on controversial agency climate, water and other rules.

Groups Argue Scrapped NAS Study Could Have Aided EPA Nuclear Rule

Environmentalists are opposing a Nuclear Regulatory Commission (NRC) decision to halt a National Academy of Sciences (NAS) review of cancer risk near nuclear power facilities, arguing the study could have informed federal regulations, including EPA's effort to incorporate new science into its decades-old radiation standards for nuclear reactors.

News Briefs

Farm Withdraws Novel CWA Air Permit Suit Over Mootness

A North Carolina farm has withdrawn a long-running suit over states' power to mandate Clean Water Act (CWA) permits for stormwater-borne discharges of feathers and other airborne pollutants from concentrated animal feeding operations (CAFOs) over the farm's concerns that the suit would be declared moot and thrown out.

Obama Says EPA Ozone NAAQS Decision 'Complicated'

President Obama is acknowledging that EPA's looming decision on whether to tighten its ozone national ambient air quality standards (NAAQS) is a "really complicated" situation, saying he recognizes some concerns from states about being placed out of attainment with a stricter limit but also touting the benefits of reducing ozone.

Greenwire

ENERGY POLICY:

Industry execs pressed Okla. governor on message -- emails

Manuel Quiñones and Mike Soraghan, E&E reporters

Published: Monday, September 21, 2015

Two well-known energy executives pressed Oklahoma Gov. Mary Fallin (R) to pay more attention to coal and oil in her public remarks, according to emails obtained by *Greenwire*.

The documents show Fallin preparing for the third annual Oklahoma Governor's Energy Conference in Tulsa on Oct. 9, 2013. That morning, she emailed a top adviser about her remarks.

"I made some changes last night to the speech," Fallin wrote. "There's been several recent articles with more current data and made it more balanced with an all the above."

Many politicians at the state and federal levels have been struggling with balancing their support for renewable sources of energy and more conventional power options.

For years, observers watched President Obama's State of the Union address to see whether he would mention coal or nuclear or push an "all-of-the-above" energy strategy.

Fallin told policy adviser Andrew Silvestri that Continental Resources Inc. CEO Harold Hamm thought she wasn't giving oil enough attention. And Alliance Resource Partners LP CEO Joe Craft thought she wasn't focusing enough on coal.

Both Hamm and Craft, a native of eastern Kentucky, are prolific donors to political campaigns. Both gave money to Fallin's election effort, state records show.

"Harold [H]amm felt like we don't give oil its attention and [J]oe felt we give coal no attention," Fallin wrote. "On coal I mention it on national terms as a mix of the energy resources."

She also wrote Silvestri on Oct. 9: "Can you check on the revenue from gross production tax[?] My notes say it's close to one billion a year. Of that Hamm says over 63 percent is oil tax."

While Oklahoma is not a major coal state, it produced more than 1 million short tons in 2013 from mines in five counties in the eastern part of the state.

State regulators have also for years been at odds with the Interior Department's Office of Surface Mining Reclamation and Enforcement about oversight of mining operations.

"With regard to the coal issue," Silvestri wrote on Oct. 9, "I would recommend you not make your pro coal

comments too strong. No Oklahoma coal is used to make" energy in Oklahoma.

Fallin's published 2011 energy plan includes an aim to "Promote opportunities to enhance Oklahoma coal production and streamline state processes to create effective regulation."

"While we don't explicitly say this, part of the design of your energy plan is to move away from the use of out of state coal for energy [generation] and to promote Oklahoma sources of energy like oil, gas and wind," Silvestri wrote.

Silvestri also said Craft's presence at the energy conference was evidence of the Fallin administration's embrace of coal as part of an all-inclusive policy.

Silvestri was a political action coordinator for Chesapeake Energy Corp. before joining the Fallin administration, according to an online profile. He's now a government relations manager at Google Inc.

Fallin spokesman Alex Weintz described the conversation between the governor and Silvestri as ensuring that "the remarks introducing the plan reflect the balance and 'all of the above' philosophy the plan pushes."

He said, "It's meant to be a balanced 'all of the above' energy strategy that emphasizes the importance of all forms of energy production."

Fallin has maintained the message. At the conference last year, Fallin said, "We are producing a lot of American-made energy here in our state. We're also doing something some other states, maybe a majority of states, aren't doing, and that is talking an all-of-the-above energy strategy."

FEDERAL AGENCIES:

IGs burdened by budget, bureaucracy -- survey

Kevin Bogardus, E&E reporter

Published: Monday, September 21, 2015

Federal agencies' internal watchdogs are feeling hampered by budget cuts and tiresome federal hiring rules.

In a new survey by the Association of Government Accountants and Kearney & Co., the inspectors general spread out across the federal government said they are not immune from these common problems that hinder other agency officials.

"IGs continue to be challenged with tight budgets, an ineffective federal hiring process and one-size-fits-all-mandated requirements," the report concluded.

As Washington, D.C., gears up for another potential government shutdown, the agency watchdogs also have learned to cope with the new reality of budget shortfalls and unpredictability.

"The 2015 survey results indicated IGs are adjusting to a 'new normal' when it comes to the budget and continuing resolutions and, like the rest of the government, adapting to and managing this uncertainty," the report said.

The inspectors general also want to have direct hiring authority to quickly replace departing staff. Their offices have thinned while waiting on the "lengthy and seemingly ineffective federal hiring process."

According to the survey, 43 percent of the IGs said the hiring process results in delays, with 18 percent saying the process needs "significant reengineering." Thirty-nine percent said the process was adequate.

The survey also found that the IGs had been hurt by budget cuts. Forty-five percent of them had undergone a staff decline when asked to compare their offices' staffing levels from fiscal 2012 to fiscal 2015.

AGA and Kearney developed an online survey that was sent to IGs to craft the report.

They also interviewed staff from several inspector general offices. In addition, to encourage people to speak freely, they granted anonymity to all survey participants.

The inspectors general have created controversy recently by complaining of agency officials blocking their investigations.

In a letter in August last year, 47 IGs blasted the Obama administration for withholding information during their investigations (*Greenwire*, Aug. 6, 2014). U.S. EPA Inspector General Arthur Elkins has been one of the more vocal among the watchdogs in making this point (*Greenwire*, Feb. 3).

Nevertheless, the IG survey found that only a minority of agency watchdogs had felt impeded by management.

Fifteen percent said "a dispute with management over access to information or a question regarding the IG's authority" had delayed an investigation in fiscal 2013 or 2014. The other 85 percent said that hadn't happened to them.

In addition, 11 percent of the IGs said their agency was "rarely timely" when responding to information requests. Eighty-nine percent said those requests were fulfilled in an "almost always timely" or "somewhat timely" fashion.

Also, 85 percent of the IGs said they and their agency leaders hold the same view of the watchdog's authority to carry out his or her responsibilities.

TRANSPORTATION:

Treasury chief's daughter picked for DOT's top financial post

Sean Reilly, E&E reporter

Published: Monday, September 21, 2015

This story was updated at 2:30 p.m. EDT.

President Obama is tapping Shoshana Lew to become the next chief financial officer for the Department of Transportation.

Lew, the daughter of Treasury Secretary Jack Lew, has been DOT's deputy assistant secretary for transportation policy since 2013, the White House said Friday in announcing that Obama plans to nominate her for the Senate-confirmed position.

From 2009 to 2013, Shoshana Lew also served as a policy adviser and special assistant to the deputy director of the Office of Management and Budget; a policy adviser and senior policy director for energy and climate change at the White House Domestic Policy Council; and a senior adviser at the Interior Department's Bureau of Ocean Energy Management.

At DOT, she would replace Sylvia Garcia, who stepped down this spring and is now chief operating officer and chief of staff at the Chicago Transit Authority, where Dorval Carter, another DOT veteran, is now president, their LinkedIn profiles indicate. Currently overseeing the chief financial officer's responsibilities is Lana Hurdle, deputy assistant secretary for budget and programs, according to a department spokeswoman.

In a statement on Shoshana Lew's nomination, Transportation Secretary Anthony Foxx called her an "outstanding public servant" who has taken on some of the department's "thorniest issues," such as accelerating transportation projects and establishing a more coordinated approach toward public-private partnerships.

"Time after time, she gets results," Foxx said. "Her track record of diligent and impactful work has earned her this nomination, and I look forward to working with her" as CFO.

Lew has a bachelor's degree in American history from Harvard University and a master's in the same subject from Northwestern University, according to her LinkedIn profile.

MINING:

Execs seek blessing from Vatican

Published: Monday, September 21, 2015

Leaders of several major mining companies will meet with Vatican officials to help improve the reputation of their industry.

Mining companies are grappling with falling commodity prices as well as rising concerns over climate change and environmental damage, including from Pope Francis (*ClimateWire*, June 18).

But the companies are banking on the Vatican's incredible influence in resource-rich countries to improve their image.

"The Catholic Church is very heavily involved with a number of [nongovernmental organizations] that are engaged with the mining industry. This is all about being able to tell our story and getting a fair hearing for the industry," said Mark Cutifani, chief executive of Anglo American PLC.

The mining company officials will meet with Cardinal Peter Turkson, the lead author of an encyclical released this year that criticized multinational companies for harming the planet.

"These are people who are important in their communities, and so we need to get them interested in what mining is about," Cutifani said (James Wilson, *Financial Times*, Sept. 18). **-- BTP**

PEOPLE:

Bracewell & Giuliani beefs up enviro law practice

Robin Bravender, E&E reporter

Published: Monday, September 21, 2015

Bracewell & Giuliani LLP is adding four new partners to its environment and natural resources practice.

Sara Burgin, Kevin Collins, Matt Paulson and Whit Swift are setting up shop in the law firm's Austin, Texas, office after leaving their Austin-based environmental practice at Katten Muchin Rosenman LLP.

PEOPLE

The lawyers have worked on issues from clean air and water cases to industrial accidents and endangered species cases.

In its announcement of the new hires today, Bracewell said the new team members will add to "a bench of excellence across Texas, including deep experience in air, water, wetlands, and waste issues, as well as contested case proceedings, strategic permitting assistance, infrastructure development, government investigations, enforcement defense, and crisis response."

Bracewell's environmental practice is anchored in Texas and Washington, D.C., and represents energy and industrial clients.

Paulson said the move marks "an unparalleled opportunity to offer clients market-leading capabilities in all areas of environmental law and policy."

Paulson was the head of Katten's environmental aspects of energy production practice and co-chairman of the firm's environmental advisory group, according to his LinkedIn profile.

Burgin has more than 30 years of experience representing industry and business clients in water issues, according to her LinkedIn profile. Prior to joining Katten's Austin office in 2013, she was special counsel at Baker Botts LLP and a partner at Brown McCarroll LLP.

Collins, a former assistant U.S. attorney in the Eastern District of Texas, has represented companies in environmental crime cases and advised clients on workplace safety and environmental issues.

Swift has experience advising industrial companies on state and federal air quality permitting and regulations, according to Bracewell.

AIR POLLUTION:

Volkswagen apologizes, halts sales of some diesel models

Sean Reilly, E&E reporter

Published: Monday, September 21, 2015

As its stock price plummeted today, Volkswagen halted sales of some new diesel models in the United States after U.S. EPA and California regulators accused the German automaker of cheating on Clean Air

Act emissions rules.

In an email this morning, company spokesman John Schilling said the freeze applies to new four-cylinder turbo diesel VW and Audi models, as well as certified used cars in that category. Schilling did not say how many vehicles are affected by the "stop sale" or how long the halt could last.

The freeze came on the heels of Friday's announcement by EPA and the California Air Resources Board that VW had installed illegal software in almost 500,000 cars from model years 2009 to 2015 that turn on full pollution controls only when the cars undergo emissions tests (*Greenwire*, Sept. 18). By early this afternoon, the price of VW's publicly traded shares on the Frankfurt Stock Exchange was down almost 17 percent.

In a statement yesterday, Martin Winterkorn, the CEO of Volkswagen AG, said the company would fully cooperate with regulators to "clearly, openly, and completely establish all of the facts of this case," and has ordered an external investigation. Winterkorn also apologized for violating customers' trust.

"We do not and will not tolerate violations of any kind of our internal rules or of the law," Winterkorn said.

But according to the notice of violation issued Friday by EPA, the company initially denied responsibility for emissions problems. After West Virginia University's Center for Alternative Fuels, Engines and Emissions last year published a study that found "significantly higher in-use emissions" for two VW models, the company claimed that the spike could be attributed to "various technical issues and unexpected in-use conditions," the notice said.

Only when EPA and the air resources board threatened to withhold approval of 2016 model year diesel engines did the company "admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing," according to the notice.

Volkswagen could face billions of dollars in fines for the alleged cheating.

If the company willfully and fraudulently sold cars to customers, "EPA should pursue the most severe action possible to deter others from doing the same," Rep. Frank Pallone of New Jersey, the top Democrat on the House Energy and Commerce Committee, said in a statement. "Such deceitful actions violated the law and misled consumers, while other law-abiding companies were disadvantaged and the public health was put at risk. We must ensure that this does not happen again and that consumers can trust the products that they buy."

A spokesman for Energy and Commerce Chairman Fred Upton (R-Mich.) had no immediate comment this morning. A spokesman for Senate Commerce, Science and Transportation Chairman John Thune (R-S.D.) declined comment.

RAIL:

Feds probe S.D. ethanol derailment

Published: Monday, September 21, 2015

The National Transportation Safety Board is investigating the derailment of an ethanol train in South Dakota on Saturday.

Seven tanker cars filled with ethanol derailed at about 6:15 a.m. local time on a small bridge above a dry

creek, according to BNSF Railway Co. Headed from Mina, S.D., to Deer Park, Texas, the train left the rails between Scotland and Lesterville at the allowed speed of 10 mph, said NTSB spokesman Terry Williams.

At least one car caught fire, but no injuries were reported.

BNSF said the tracks could reopen as early as tomorrow evening, as federal investigators estimated a three- to five-day investigation (Associated Press, Sept. 20). **-- DTB**

ENERGY EFFICIENCY:

Updated homes increase risk of asthma

Published: Monday, September 21, 2015

More energy efficient homes could double asthma rates in the United Kingdom by 2050, according to a new study.

By the time the United Kingdom hopes to reduce its carbon emissions by 80 percent, asthma rates will rise by 80 percent, while concentrations of nitrogen dioxide and volatile organic compounds, which are linked to aerosols, will be 30 and 60 percent, respectively, above World Health Organization limits, according to the report.

"With the expected increase in airtightness for U.K. dwellings, it is anticipated that indoor air quality will generally become poorer, resulting in an increase in the number of cases of health symptoms," air quality expert Hazim Awbi said in the report.

Awbi, professor of the built environment at University of Reading's school of construction management and engineering, said less drafty homes leave more pollutants from cooking, cleaning and laundry airborne, increasing the risk of allergic and asthma symptoms, lung cancer, chronic obstructive pulmonary disease, airborne respiratory infections and cardiovascular disease.

Peter Howarth, a professor of allergy and respiratory diseases at University of Southampton, said poor ventilation also leads to more humidity, mold and pests, which cause similar problems.

Young mothers, children and older people, groups spending long periods of time indoors, are particularly at risk.

Awbi, whose study was funded by Beama, an electro-technical trade group that includes ventilation system manufactures, said opening windows is not enough and some form of mechanical ventilation should be used.

"Many people spend 70-80 percent of their time at home, or even as much as 90 percent indoors if you include workplaces," Awbi said. "Given that the average person takes in 500 liters of air an hour, if the air you are breathing in is polluted, you can imagine how much of this pollution is going to be absorbed" (Denis Campbell, London *Guardian*, Sept. 19). **-- DTB**

CLEAN POWER PLAN:

Pa., Mo. kick off listening sessions, stakeholder meetings

Emily Holden and Rod Kuckro, E&E reporters

Published: Monday, September 21, 2015

Pennsylvania's Department of Environmental Protection has begun its series of 14 "listening sessions" across the state on the Clean Power Plan and compliance issues. E&E reporter Elizabeth Harball will be in Pittsburgh today for that session.

The state also has opened a two-month comment period on the plan that ends Nov. 12. Here is a list of the questions they want the public to consider.

The Missouri Department of Natural Resources will host a meeting for its Clean Power Plan stakeholder group Wednesday in Jefferson City. It is the first such state meeting since the final rule was announced. E&E reporter Jeff Tomich will be there.

Also this week, the International Emissions Trading Association meets Thursday in New York for its Carbon Forum. EPA Senior Counsel Joe Goffman will speak, and E&ETV managing editor and host Monica Trauzzi will moderate a panel about the implications of the Clean Power Plan on emissions trading.

In case you missed it:

- E&E reporters completed an update of the state summaries on the Power Plan Hub based on interviews with officials, businesses and advocates around the country to reflect on how various states may respond to the rule.

- EPA Administrator Gina McCarthy told senators that the agency has sent the Clean Power Plan to the *Federal Register* for publication (*Greenwire*, Aug. 14).

- President Obama told a business group that critics can swing away at the Clean Power Plan, but the expected tightening of the ozone pollution standard is another matter (*E&ENews PM*, Sept. 18).

- Prospects for the embattled $2.8 billion, 895-megawatt Holcomb coal-fired plant in southwestern Kansas -- one of a few new coal units being proposed in the United States -- aren't helped by the Clean Power Plan (*EnergyWire*, Sept. 14).

- Iowa regulators are grappling with how the state's more than 5,000 megawatts of wind power will be counted by EPA toward the state's carbon reduction target under the CPP (*EnergyWire*, Sept. 17).

- Members of a House committee pressed the head of the Agriculture Department's Rural Utilities Service about how the Clean Power Plan will affect the agency's loans to rural cooperatives for their generation fleets and other infrastructure (*E&E Daily*, Sept. 17).

ENERGY EFFICIENCY:

DOE's Greenwald discusses path to double energy productivity

Published: Monday, September 21, 2015

Last week, the Department of Energy, along with the Alliance to Save Energy and the Council on

Competitiveness, unveiled a road map to double energy productivity by 2030. How does this road map fit into the series of actions the Obama administration has already taken on climate and energy? During today's OnPoint, Judi Greenwald, deputy director for climate, environment and energy efficiency at DOE, discusses the strategies stakeholders can employ to increase their energy productivity. She also talks about the policies that will be needed to reach the agency's goal.

Click here to watch today's OnPoint.

AN E&E PUBLISHING SERVICE

CLIMATEWIRE — Tue., September 22, 2015

READ FULL EDITION

1.TRANSPORTATION:

How a major terminal to ship Utah coal to the Far East sneaked into Oakland

OAKLAND, Calif. -- A contentious battle over the shipping of coal by rail through this city came to a head last night as hundreds of people lined up to share their opinions on its effects on health and safety.

2.POLITICS:

The key to a politically appropriate climate policy is not cost. MIT study finds it's lobbying

An economic analysis of how much counties would gain or lose financially under different climate policies helps explain why the renewable fuel standard was ultimately favored in Congress, even though economists say it is a less cost-effective way of reducing carbon emissions.

TODAY'S STORIES

3.RISK:
Flooding on East Coast could spike 300 times by century's end -- study

4.POLICY:
China moves to connect energy companies to the Internet

5.AGRICULTURE:
Farming to improve crops and store more CO2 gains traction in Calif.

6.EMISSIONS:
Researchers, climate models collide over how to measure melting permafrost

7.CALIFORNIA:
Homeowners in wildfire zones turn to high-risk insurance plans

8.RESEARCH:
Scientists unveil permafrost data portal

9.STATES:
N.C. fails to extend renewable tax credit

10.ADVOCACY:
S.C. Aquarium launches campaign to support sea-level-rise research

AN E&E PUBLISHING SERVICE

ENERGYWIRE — Tue., September 22, 2015

READ FULL EDITION

1.ELECTRICITY:

Low gas prices reduce consumer costs at Southeast utilities

Once clinging to its coal fleet, Southern Co.'s Georgia Power Co. has said a forced move to natural gas would drive up prices for its customers. Now the utility touts its transformation away from a predominantly coal-based utility to one with a more diverse fleet, largely because it just asked utility regulators for permission to reduce what customers are paying for fuel by 11 percent.

TOP STORIES

2.GRID:
Generator outage triggers Calif. blackouts

3.LAW:
Colo. high court to take up fracking ban cases

4.OIL SANDS:
Water needs change 'significantly' with seasons, climate -- report

ELECTRICITY

5.UTILITIES:
FirstEnergy power plant request should be denied -- Ohio PUC staff

6.SECURITY:
Federal framework cites urgent need to secure 'system-of-systems'

OIL AND GAS

7.LAW:
Chesapeake defends against Pa. royalty allegations

8.BUSINESS:
Exxon changes strategies to promote further drilling

9.FINANCE:
Fears rise over loans for oil

10.NATURAL GAS:
Fracked wetlands raise questions in Texas

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turley.jennifer@epa.gov

To: McCabe, Janet[McCabe.Janet@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 3:35:59 PM
Subject: Update for Gina on VW?

Tom R suggests this would be a good idea.....along with Stan, Tom and Liz, Fritz

Bring folks up to speed and next steps

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Senn, John
Sent: Tue 9/22/2015 3:51:50 PM
Subject: FW: Questions re Volkswagen counsel

Ex. 5

Thanks,

John

From: Susan Beck [mailto:SBeck@alm.com]
Sent: Tuesday, September 22, 2015 10:01 AM
To: Senn, John
Subject: RE: Questions re Volkswagen counsel

John,

So sorry!

As you might have realized, I meant to send the message below to my editor, not back to you.

(At least there's nothing too embarrassing in it.)

As far as following up, VW so far is not saying anything about its counsel.

I'm hoping you still might be able to help me out.

In particular, I'd like to be clear about the role played by Stuart Drake at Kirkland & Ellis, who is cc'd on the EPA letter. Has he been representing VW all along in its discussions with the EPA, or was he brought in recently?

Thanks,

Susan

Susan Beck

Senior Writer

The American Lawyer

216-925-3113

From: Susan Beck
Sent: Monday, September 21, 2015 5:07 PM
To: 'Senn, John'
Subject: RE: Questions re Volkswagen counsel

Ugghh.

Struck out with EPA. Don't really have anything. Sorry.

From: Senn, John [mailto:Senn.John@epa.gov]
Sent: Monday, September 21, 2015 4:52 PM
To: Susan Beck
Subject: Questions re Volkswagen counsel

Hi Susan—Meetu Kaul sent me your questions about firms representing Volkswagen related to the NOV we issued last Friday. VW can give you the best and most complete sense of who has been their counsel and on what matters, so I'd suggest you reach out to them.

Thanks,

John

John Senn

Deputy Communications Director

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency

(202) 564-8996 - senn.john@epa.gov

https://twitter.com/EPAJustice

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To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 4:01:44 PM
Subject: Re: LOOPING LIZ (VW) WSJ talking on background re: VW

Non-Responsive

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

On Sep 22, 2015, at 12:00 PM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:

> Chris – Liz has scheduled a background interview with you at 3 pm. Her questions are:
>
> Asking to get some background information about how this whole thing with VW came to light, getting the ins and outs of what happened and the timeline.
>
> Liz will come to your office to staff.
>
> Gwen can you add this to his calendar? It should take less than 30 minutes.
>
> Please invite me, Liz Purchia, John Millett.
>
> L
>
> **From:** Purchia, Liz

Sent: Tuesday, September 22, 2015 11:55 AM
To: Birgfeld, Erin; Valentine, Julia
Cc: Conger, Nick
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

From Amy

Asking to get some background information about how this whole thing with VW came to light, getting the ins and outs of what happened and the timeline

From: Birgfeld, Erin
Sent: Tuesday, September 22, 2015 11:54 AM
To: Purchia, Liz; Valentine, Julia
Cc: Conger, Nick
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Thanks. I'll have Gwen send an invite.

To confirm this is just on background. Anything in particular we should prep for?

From: Purchia, Liz
Sent: Tuesday, September 22, 2015 11:52 AM
To: Birgfeld, Erin; Valentine, Julia
Cc: Conger, Nick
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Let's do 3pm. I'll come up.

From: Birgfeld, Erin
Sent: Tuesday, September 22, 2015 11:44 AM
To: Purchia, Liz; Valentine, Julia
Cc: Conger, Nick
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

He has time at 3. I could reschedule meetings to accommodate earlier. Likely 12:30 would work too.

What is the preferred timing?

From: Purchia, Liz
Sent: Tuesday, September 22, 2015 11:40 AM
To: Valentine, Julia
Cc: Conger, Nick; Birgfeld, Erin
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Does Chris have time today to do calls?

From: Purchia, Liz
Sent: Tuesday, September 22, 2015 11:29 AM
To: Valentine, Julia
Cc: Conger, Nick; Birgfeld, Erin
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Ex. 5

From: Valentine, Julia

Sent: Tuesday, September 22, 2015 11:28 AM
To: Purchia, Liz
Cc: Conger, Nick; Birgfeld, Erin
Subject: LOOPING LIZ (VW) WSJ talking on background re: VW

Julia P. Valentine

Office of Public Affairs

U.S. EPA

202.564.2663 direct

202.740.1336 m/txt

From: Birgfeld, Erin
Sent: Tuesday, September 22, 2015 11:26 AM
To: Conger, Nick
Cc: Valentine, Julia; Senn, John
Subject: Fwd: talking on background re: VW

Another incoming...

Sent from my iPhone

Begin forwarded message:

> **From:** "Argyropoulos, Paul" <Argyropoulos.Paul@epa.gov>
> **Date:** September 22, 2015 at 11:23:11 AM EDT
> **To:** "Harder, Amy" <Amy.Harder@wsj.com>
> **Cc:** "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>
> **Subject: RE: talking on background re: VW**
>
> Hi Amy,

I'm copying Erin Birgfeld. She'll be able to direct you to the most appropriate person on this issue.

Thanks, Paul

Paul Argyropoulos

Senior Policy Advisor

US EPA

Office of Transportation and Air Quality

Phone: 202-564-1123

Mobile: 202-577-9354

Email: argyropoulos.paul@epa.gov

Web: www.epa.gov

From: Harder, Amy [mailto:Amy.Harder@wsj.com]
Sent: Tuesday, September 22, 2015 11:21 AM
To: Argyropoulos, Paul
Subject: talking on background re: VW

Hello Paul, I hope you're doing well. I'm just trying to get some background information about how this whole thing with VW came to light, getting the ins and outs of what happened and the timeline. Would you be able to speak to this on background as "someone familiar" with the news?

Would you be able to talk at your soonest convenience today? I'm at 202.862.6631. Thanks much,

amy

Amy Harder

energy reporter

The Wall Street Journal

O: 202.862.6631

C: 202.906.9629

amy.harder@wsj.com

@AmyAHarder

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 4:02:30 PM
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Yah. Weird.

From: Grundler, Christopher
Sent: Tuesday, September 22, 2015 12:02 PM
To: Birgfeld, Erin
Subject: Re: LOOPING LIZ (VW) WSJ talking on background re: VW

Ok. I guess she can't talk to her colleague Mike Spector with whom we did this yesterday!

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

On Sep 22, 2015, at 12:00 PM, Birgfeld, Erin <Birgfeld.Erin@epa.gov> wrote:

> Chris – Liz has scheduled a background interview with you at 3 pm. Her questions are:
>
> Asking to get some background information about how this whole thing with VW came to light, getting the ins and outs of what happened and the timeline.
>
> Liz will come to your office to staff.
>
> Gwen can you add this to his calendar? It should take less than 30 minutes.

Please invite me, Liz Purchia, John Millett.

L

From: Purchia, Liz
Sent: Tuesday, September 22, 2015 11:55 AM
To: Birgfeld, Erin; Valentine, Julia
Cc: Conger, Nick
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

From Amy

Asking to get some background information about how this whole thing with VW came to light, getting the ins and outs of what happened and the timeline

From: Birgfeld, Erin
Sent: Tuesday, September 22, 2015 11:54 AM
To: Purchia, Liz; Valentine, Julia
Cc: Conger, Nick
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Thanks. I'll have Gwen send an invite.

Ex. 5 Anything in particular we should prep for?

From: Purchia, Liz
Sent: Tuesday, September 22, 2015 11:52 AM
To: Birgfeld, Erin; Valentine, Julia
Cc: Conger, Nick
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Let's do 3pm. I'll come up.

From: Birgfeld, Erin
Sent: Tuesday, September 22, 2015 11:44 AM
To: Purchia, Liz; Valentine, Julia
Cc: Conger, Nick
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

He has time at 3. I could reschedule meetings to accommodate earlier. Likely 12:30 would work too.

What is the preferred timing?

From: Purchia, Liz
Sent: Tuesday, September 22, 2015 11:40 AM
To: Valentine, Julia
Cc: Conger, Nick; Birgfeld, Erin
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Does Chris have time today to do calls?

From: Purchia, Liz
Sent: Tuesday, September 22, 2015 11:29 AM
To: Valentine, Julia
Cc: Conger, Nick; Birgfeld, Erin
Subject: RE: LOOPING LIZ (VW) WSJ talking on background re: VW

Ex. 5 I'll follow up with her.

From: Valentine, Julia
Sent: Tuesday, September 22, 2015 11:28 AM
To: Purchia, Liz
Cc: Conger, Nick; Birgfeld, Erin
Subject: LOOPING LIZ (VW) WSJ talking on background re: VW

Julia P. Valentine

Office of Public Affairs

U.S. EPA

202.564.2663 direct

202.740.1336 m/txt

From: Birgfeld, Erin
Sent: Tuesday, September 22, 2015 11:26 AM
To: Conger, Nick
Cc: Valentine, Julia; Senn, John
Subject: Fwd: talking on background re: VW

Another incoming...

Sent from my iPhone

Begin forwarded message:

From: "Argyropoulos, Paul" <Argyropoulos.Paul@epa.gov>
Date: September 22, 2015 at 11:23:11 AM EDT
To: "Harder, Amy" <Amy.Harder@wsj.com>
Cc: "Birgfeld, Erin" <Birgfeld.Erin@epa.gov>
Subject: RE: talking on background re: VW

Hi Amy,

I'm copying Erin Birgfeld. She'll be able to direct you to the most appropriate person on this issue.

Thanks, Paul

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US EPA

Office of Transportation and Air Quality

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Mobile: 202-577-9354

Email: argyropoulos.paul@epa.gov

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amy

Amy Harder

energy reporter

The Wall Street Journal

O: 202.862.6631

C: Ex. 6

amy.harder@wsj.com

Ex. 6

To: Bunker, Byron[bunker.byron@epa.gov]
From: Transport Topics
Sent: Tue 9/22/2015 4:05:28 PM
Subject: ATRI Survey - Nearly Half of Commercial Vehicle Drivers Wouldn't Pay for Reserved Parking: TT Express

To view in browser, Click here.

September 22, 2015

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IN THIS ISSUE:

ATRI Survey: Nearly Half of Commercial Vehicle Drivers Wouldn't Pay for Reserved Parking
Capitol Agenda for the Week of Sept. 22: A Matter of Priorities
Peloton On-Highway Platooning Test to Take Place in Texas
And more...

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ATRI Survey: Nearly Half of Commercial Vehicle Drivers Wouldn't Pay for Reserved Parking

Nearly half of commercial vehicle drivers participating in a survey said they would refuse to pay for reserved parking, according to new American Transportation Research Institute research.

Capitol Agenda for the Week of Sept. 22: A Matter of Priorities

Scott Darling has not yet been confirmed as the new head of the Federal Motor Carrier Safety Administration, but we do now know what his priorities as the acting chief are for the rest of this year. Here's what is ahead for trucking this week on Capitol Hill.

Peloton On-Highway Platooning Test to Take Place in Texas

ORLANDO, Fla. - An executive at Peloton Technology said Texas is where the initial on-highway tests of the company's platooning system will take place next year.

This week's cartoon: "Good Luck At SuperTech"

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Georgia Truck Association, Carriers Sue Over Local Fuel Sales Tax

The Georgia Motor Truck Association and three carriers have filed a class action lawsuit against the state Department of Revenue alleging that a new law allowing cities and counties to impose a 1% per-gallon fuel sales tax is unconstitutional.

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Omnitracs Executive Confident FMCSA Final Rule on ELDs Will Address Industry Concerns

ORLANDO, Fla. - An executive with Omnitracs said he is optimistic the federal government's final rule on the mandatory use of electronic logging devices will address concerns previously raised by the trucking industry.

National Diesel Average Drops to Lowest Level Since June 2009

The average price of diesel fuel in the United States declined to the lowest level since June 2009, the Department of Energy reported Sept. 21.

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Volkswagen Scandal Harkens Back to Truck Engine Makers' 1998 Battle With EPA

The U.S. Environmental Protection Agency said Volkswagen cheated on air-pollution rules for its diesel cars with a defeat device, reminiscent of 1998 when heavy-duty truck manufacturers were doing the same thing.

TMC SuperTech Gets Under Way in Orlando

The 11th annual TMC SuperTech competition is under way in Orlando, Florida, with 145 truck technicians vying for the title of Grand Champion.

Help, Drivewyze Add Electronic Prescreening Sites

Heavy-duty truck electronic prescreening and clearance networks Help Inc., which relies on transponders, and Drivewyze Inc., which uses mobile devices, announced additional sites across the country.

Span Alaska Cites LTL Freight Forwarding in Purchase of Pacific Alaska Freightways

Freight forwarder Span Alaska Transportation has acquired transportation services provider Pacific Alaska Freightways, creating what Span Alaska termed the largest less-than-truckload freight forwarder serving Alaska.

More News Below

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More Business Awaits if Intermodal Service Improves Further

FORT LAUDERDALE, Fla. - Railroads have made progress in improving service quality this year, compared with last year's delay-plagued operations, but they will have to keep improving to win more business from customers, shippers said.

N.Y., N.J. Ask US to Pay Half of $20 Billion Rail Tunnel

Govs. Chris Christie of New Jersey and Andrew Cuomo of New York want the federal government to pay half of a $20 billion commuter rail tunnel under the Hudson River.

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IronPlanet Raises $55 Million in Funding

Online truck auction company IronPlanet said it closed a $55 million senior secured credit facility that was used to pay off a loan and provide growth funding.

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To: Wehrly, Linc[wehrly.linc@epa.gov]
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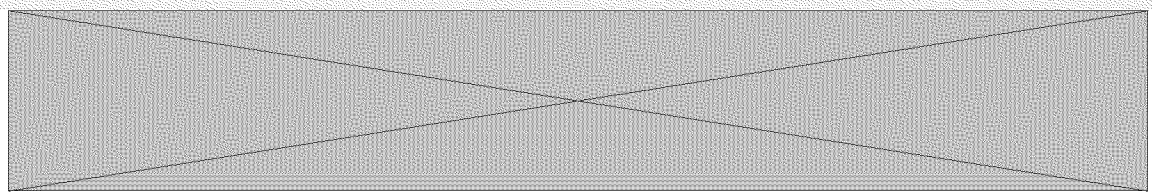
To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Green Car Reports
Sent: Tue 9/22/2015 4:05:32 PM
Subject: Green Car Report Daily Headlines

Email not displaying correctly? View it in your browser.



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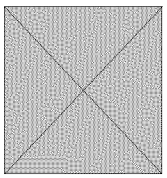
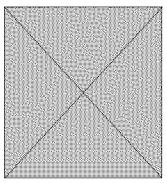
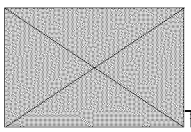




The latest from your friends at GCR:

VW Diesel Update, Apple Car 2019, Electric-Car Advertising: Today's Car News

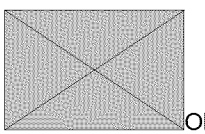
Sep 22, 2015 03:30 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Today, we have an update on the Volkswagen diesel deception scandal, a report claiming the Apple electric car could be ready by 2019, and a study that says electric cars aren't selling because manufacturers don't advertise them. All this and more on Green Car Reports. Electric cars aren't selling because automakers don't advertise them, a new...

comments | read more

That BMW Owner Who Got An Electric Car? The BMW's For Sale

Sep 22, 2015 03:00 pm | feedback@highgearmedia.com (John Voelcker)

 Oh, those dastardly electric cars. Their siren-like allure tempts otherwise innocent drivers to abandon their life-long infatuations with ultimate German

driving machines and other fine automotive specimens that deliver driving pleasure via explosions of vaporized hydrocarbons thousands of times a minute. Where will this madness end? DON'T MISS...

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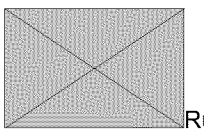
Apple Electric Car Is "Committed Project," To Ship In 2019: Report

Sep 22, 2015 02:15 pm | feedback@highgearmedia.com (Stephen Edelstein)

 Rumors continue to swirl around the existence of an Apple-branded electric car, even in the absence of any official confirmation of the project by the tech company. News stories point to the hiring of employees with auto-industry experience, and discussions between Apple and car-related entities. Now, there's at least an indication of when the...

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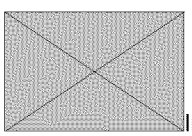
Mazda Tests Hybrid Vs Electric To See Which Japanese Drivers Prefer

Sep 22, 2015 12:15 pm | feedback@highgearmedia.com (Stephen Edelstein)

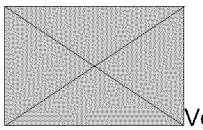
 In large part, Mazda hasn't strayed far from the internal-combustion path while looking for ways to improve the efficiency of its vehicles. The Japanese carmaker has delivered notable fuel-economy gains using its SkyActiv line of efficiency-focused powertrains and new vehicles developed around them. Hybrid and all-electric powertrains have been...

comments | read more

VW: 11 Million Diesels Had Cheating Software, $7.3 Billion Set Aside; Criminal

Probe Reported

Sep 22, 2015 11:45 am | feedback@highgearmedia.com (John Voelcker)

 Volkswagen AG said today it would adjust its third-quarter earnings to set aside $7.3 billion (€6.5 billion) for costs related to its admission that it used software to cheat on U.S. emissions tests of its diesel engines. That sum will "cover the necessary service measures and other efforts to win back the trust of our customers," it said...

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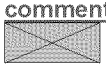
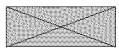
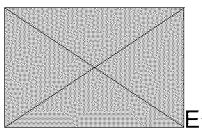




Electric Cars Aren't Selling Because Makers Can't, Don't Market Them: Report

Sep 22, 2015 11:00 am | feedback@highgearmedia.com (Stephen Edelstein)

 Electric-car sales have grown more or less steadily over the past years, but the segment still represents a tiny fraction of total new-car sales. Factors like range, charging infrastructure, and low production volumes all contribute to caution on the part of the car-buying public. But could it also be that automakers just aren't very enthusiastic...

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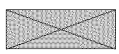

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To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Bunker, Byron[bunker.byron@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 4:11:12 PM
Subject: FW: (VW) AP - Deadline ASAP!

Chris,

Ex. 5

Our Detroit bureau is wondering if there are any more cars in the U.S. that might have the emissions defeat device, given VA's revelation that 11 million cars worldwide had the same software.

Ex. 5

Also, why didn't EPA discover this sooner?

Ex. 5

You said yesterday that EPA is looking at other diesels as well. Are you looking at VW gasoline engines too?

Ex. 5

From: Senn, John
Sent: Tuesday, September 22, 2015 12:02 PM
To: Valentine, Julia; Birgfeld, Erin; Millett, John; Conger, Nick
Subject: RE: (VW) AP

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From: Valentine, Julia
Sent: Tuesday, September 22, 2015 11:54 AM
To: Birgfeld, Erin; Millett, John; Conger, Nick
Cc: Senn, John
Subject: (VW) AP

Sent from USEPA iPhone

Begin forwarded message:

From: "Purchia, Liz" <Purchia.Liz@epa.gov>
Date: September 22, 2015 at 11:45:12 AM EDT
To: "Valentine, Julia" <Valentine.Julia@epa.gov>
Subject: FW: VW follow-up

We should try to answer this one as soon as we can.

-----Original Message-----
From: Daly, Matthew [mailto:MDaly@ap.org]
Sent: Tuesday, September 22, 2015 11:43 AM
To: Purchia, Liz
Subject: VW follow-up

Hi Liz

Our Detroit bureau is wondering if there are any more cars in the U.S. that might have the emissions defeat device, given VA's revelation that 11 million cars worldwide had the same software.

Also, why didn't EPA discover this sooner?

You said yesterday that EPA is looking at other diesels as well. Are you looking at VW gasoline engines too?

Thanks.
Matthew

Matthew Daly
Congressional Reporter
The Associated Press
202-641-9481 direct
202-365-2993 cell
Follow me on Twitter: @MatthewDalyWDC

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From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 4:18:19 PM
Subject: VW's $7 billion screwup: A lesson in how to destroy a brand
MAIL_CONVERSATION_TOPIC: VW's $7 billion screwup: A lesson in how to destroy a brand
Created: Fri 3/18/2016 6:18:19 PM

As many as 11 million vehicles worldwide might be affected by software that U.S. regulators say cheated clean air rules.

View article...

To: Wehrly, Linc[wehrly.linc@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]; Manners, Mary[manners.mary@epa.gov]
From: Ex. 6
Sent: Tue 9/22/2015 4:26:50 PM
Subject: Fwd: A Super EPA Success Story!

A big win for the compliance division! You do EPA proud. Congratulations and many thanks for continuing to do the vitally important work of the division. Just think of what you could do with a little more $$!!

All the best,
Ex. 6

Sent from my iPad

Begin forwarded message:

From: Ex. 6
Date: September 22, 2015 at 7:48:04 AM EDT
To: Ex. 6
<Ex. 6>, Carrie Wehling <wehling.carrie@epa.gov>
Subject: A Super EPA Success Story!

I don't know whether you've been following the VW diesel scandal, but there was a great article in the *NY Times* yesterday reporting that it was **EPA threats** that finally got VW to confess that it had fabricated emissions data for its 2015 and 2016 diesel cars. http://tinyurl.com/pclxzbz The story also explains how the fraud was uncovered -- interestingly, by an environmental group (working with a university) that decided to test emissions from U.S. diesel vehicles.

The story also does a good job of laying out why EPA, with better enforcement authority than NHTSA, was in a good position to move quickly and forcefully to deal with VW.

Why you need regulators and strong environmental laws!

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 4:48:11 PM
Subject: VW CEO's days appear numbered as emissions crisis deepens
MAIL_CONVERSATION_TOPIC: VW CEO's days appear numbered as emissions crisis deepens
Created: Fri 3/18/2016 6:18:18 PM

Martin Winterkorn's days as head of Volkswagen AG appeared numbered on Tuesday after the German carmaker said a scandal over falsified vehicle emission tests in the United States could affect 11 million of its cars worldwide.

View article...

To: Bunker, Byron[bunker.byron@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Cohen, Janet[cohen.janet@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 4:56:41 PM
Subject: WP: Anatomy of A VW deception

http://www.washingtonpost.com/news/wonkblog/wp/2015/09/22/anatomy-of-volkswagons-deception-the-recall-that-never-fixed-any-cars/

•□□□□□□□□

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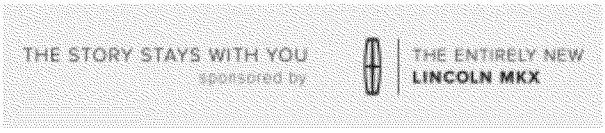

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Wonkblog

Anatomy of Volkswagon's deception: The recall that never fixed any cars.

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By Peter Whoriskey and Joby Warrick September 22 at 12:20 PM

EPA/JULIAN STRATENSCHULTE

Volkswagen's decision to equip 11 million vehicles worldwide with devices to cheat emissions tests has sent the company into an acute corporate crisis in recent days. But on December 2, 2014, the company told U.S. and California regulators that their engineers had a straightforward fix.

Volkswagen assured officials then that a software change would remedy the overflow of pollution emitted by their diesel cars, according to state and federal letters to the company. At the time, Volkswagen proposed a "voluntary recall" of about 500,000 vehicles. State and federal officials approved the plan.

It was either technical failure or, some officials said, another ruse.

By May of this year, California tests showed that "the recall calibration did reduce emissions to some degree but NOx emissions were still significantly higher than expected."

The extent of the recall last year is unknown. Company officials wouldn't say this week how many recall notification letters Volkswagen issued to consumers, and how many consumers brought their cars in for the purported fix.

But the incident is one of the highlights in what federal and state officials have likened to a cat-and-mouse game between regulators and one of the world's largest automakers.

"They basically ran out of excuses," said Stanley Young, spokesperson for the California Air Resources Board. "They would say the tests weren't at the right temperature, or some other issue. We had them in [to our offices] several times."

EPA administrator Gina McCarthy said on Tuesday that the agency would step up efforts to look for cheating by other manufacturers, though she suggested that Volkswagen was an "outlier" in the extent of its cheating to defeat emissions standards.

"We are not going to sit down around and worry about whether or not there are other devices. We're going to find it," she said. "So right now we're upping our game in terms of going out and doing the work to take a look at what we need to do with other vehicles."

The company's dire diesel troubles have erupted over just a few days, but they were a long time in gestation.

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The regulations that shaped the design of their diesel engines were put in place more than 15 years ago, when the EPA finalized rules that raised the emission standards for diesel cars.

After a grace years-long period, the tough standards were phased in between 2004 and 2007. At the time, the government acknowledged that meeting the standards for NOx, or nitrogen oxide, as well as soot, would be difficult.

"Manufacturers have expressed concerns that diesel-fueled vehicles would have difficulty meeting NOx and particulate matter levels like those contained in today's rule," EPA officials wrote in issuing the new standards. "Clearly, these standards will be challenging."

For a time, Volkswagen and other automakers stepped back from the U.S. diesel car market. It was a time to retool. Experts said the challenge of making a diesel engine clean enough for the U.S. standards - without compromising how the engine works - is very difficult.

"NOx is more of a challenge for diesel engines than it is for gasoline engines," said John Storey, distinguished research and development staff member at Oak Ridge National Laboratory. "The strategies companies use to clean them up all have an impact on performance, fuel economy and maintenance."

The engineering hurdles in controlling diesel emissions are high enough, some experts said, that they may provide an incentive for companies to skirt the rules.

"I can't say I'm surprised," John M. DeCicco, Ph.D. Research Professor at the University of Michigan Energy Institute, of the recent revelations. "The temptation to game the system with a defeat device is definitely high because of the technical challenges."

In 2008, Volkswagen came back with a diesel version of the Jetta. The company touted it as an example of the "clean diesel." It won raves, including "Green Car of the Year" at the Los Angeles Auto Show.

"After a three-year break that seemed interminable to fans, Volkswagen's back in the U.S. diesel-car market with a clean-burning diesel in its popular Jetta compact sedan," USA Today told readers.

But what seemed like a breakthrough seems now, in the light of recent revelations, like a massive cheat.

The company's two-liter diesel engines in the U.S. had been equipped with a "defeat device" that allowed the cars to pass federal emissions tests despite emitting more than 10 times the permitted amounts of NOx when it is on the road. Those emissions help produce smog on hot summer days, triggering a variety of health problems, particularly for asthmatics and other people with breathing difficulties.

As has been widely reported, the emission problems were detected in a May 2014 report by the International Council on Clean Transportation and West Virginia University.

The results were presented to the company and several months later, in December 2014, the company told California regulators that they had a fix. They would "recalibrate" the software that runs the engine.

"Based on this meeting, VW initiated a voluntary recall...This recall was claimed to have fixed

among other things, the increased real world driving NOx issue," according to a recent letter from the California Air Resources Board to the company.

By May of this year, California officials had run road tests on cars altered as under the recall. Despite the fix, the car showed higher than expected NOx emissions. California engineers also created a special dynamometer test, apparently to address company concerns that the testing was faulty.

California Air Resources Board "has determined that the previous recall did not address the high on-road NOx emissions, and also resulted in the vehicle failing certification standards," it told the company earlier this month.

McCarthy, speaking to reporters in Washington, acknowledged that the Volkswagen software ruse was "particularly difficult for us to detect. We haven't found similar types before but we'll take a look and make sure we're attacking it successfully," she said.

McCarthy defended the EPA's regulatory standards as reasonable, and said most other car manufacturers appear to have found a way to comply.

"This is about a NOX emission standard that was put in place a few decades ago. The industry knew what was happening. We feel pretty confident the industry has been innovating to be able to meet this standard," she said. "So we don't think that this problem with the standards at all."

McCarthy said she was gratified by Volkswagen's aggressive response in acknowledging its mistakes, even as she criticized the company for its years of deliberate deception.

"I think it will be very difficult for Volkswagen at this going to be looked at as anything other than a real outlier," she said.

Erin Birgfeld

Communications Director

Office of Transportation and Air Quality

U.S. EPA

202-564-6741 (work)

202-255-4434 (cell)

To: McCabe, Janet[McCabe.Janet@epa.gov]
From: Grundler, Christopher
Sent: Tue 9/22/2015 4:58:01 PM
Subject: Re: Update for Gina on VW?

Emily to set up?

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. EPA
202-564-1682 (DC)
734-214-4207 (Ann Arbor)

> On Sep 22, 2015, at 12:48 PM, McCabe, Janet <McCabe.Janet@epa.gov> wrote:
>
> Absolutely. So many questions
>
> Sent from my iPhone
>
>> On Sep 22, 2015, at 11:36 AM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:
>>
>> Tom R suggests this would be a good idea.....along with Stan, Tom and Liz, Fritz
>>
>> Bring folks up to speed and next steps
>>
>> Christopher Grundler, Director
>> Office of Transportation and Air Quality
>> U.S. EPA
>> 202-564-1682 (DC)
>> 734-214-4207 (Ann Arbor)

To: Grundler, Christopher[grundler.christopher@epa.gov]
Cc: Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
From: Hengst, Benjamin
Sent: Tue 9/22/2015 5:04:22 PM
Subject: In wake of VW scandal, it's time to end the self-certify era (blog in Auto News)

http://www.autonews.com/article/20150922/BLOG06/150929959

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: Belser, Evan[Belser.Evan@epa.gov]
From: Orehowsky, Gregory
Sent: Tue 9/22/2015 5:11:49 PM
Subject: Ex. 7

Ex. 7 and came across this article in car and driver where they interviewed WVU

http://blog.caranddriver.com/how-volkswagen-got-busted-for-gaming-epa-diesel-emissions-standards/

Greg Orehowsky

U.S. EPA

Office of Civil Enforcement

Air Enforcement Division

Phone 202-343-9292

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Jeff Plungis (BLOOMBERG/ NEWSROOM:)
Sent: Tue 9/22/2015 5:16:36 PM
Subject: Question on comments to Detroit News

Chris:
I'm trying to confirm the on-the-record comments you made to the Detroit News yesterday, that EPA is expanding its review to include the Audi 3.0L V6 and Porsche Cayenne, which has the same engine. Both already were certified for 2016. And that the engines were certified before the agency knew the information about VW's defeat device.

This information is now public. We'd just like to confirm with the original source that it's true and be as accurate as we can in our descriptions going forward.

I have been working with Liz Purchia and Julia Valentine in the press office but haven't heard from them since last night.

Jeff Plungis
Bloomberg News
1399 New York Avenue, NW
Washington, DC 20005
202/624-1835 (direct)
202/744-9768 (mobile)
jplungis@bloomberg.net
Twitter: @jplungis

From: Stewart, Gwen
Required Attendees: Blubaugh, Jim; Hengst, Benjamin
Location: RM: 6520 DC/RM. C-174 DOD AA - CONFERENCE CALL LISTED BELOW.
Importance: Normal
Subject: CONFIRMED: Potential Call with German MOT Secretary - VW
Categories: Purple Category
Start Date/Time: Thur 9/24/2015 3:00:00 PM
End Date/Time: Thur 9/24/2015 4:00:00 PM

MEETING SCHEDULED BY: J. BLUBAUGH

MEETING REQUEST:

Gwen,

The Germans confirmed the call with Chris for tomorrow, Thursday, September 24th at 11 AM. Please remove the "hold" on our calendars and place a note of "confirmation." Here are the details:

OITA supplied the following conference lines:

Non-Responsive

Attendees:

German Ministry of Transport - Mr. Odenwald, Director Zielke, other staff

EPA - OTAQ - Chris, Jim, Ben

EPA - OITA - Anna

U.S. Embassy staff

Thanks,
Jim

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Belser, Evan
Sent: Tue 9/22/2015 5:29:53 PM
Subject: FW: VW Presentation at the 2012 Environmentally Friendly Vehicle Conference

Very interesting.

From: Olechiw, Michael
Sent: Tuesday, September 22, 2015 11:58 AM
To: Belser, Evan
Subject: VW Presentation at the 2012 Environmentally Friendly Vehicle Conference

Evan,

Ex. 5, 7

Best Regards,

Michael R. Olechiw

Director - Light-duty Vehicles and Small Engines Center

USEPA/OTAQ/ASD

2000 Traverwood Drive

Ann Arbor MI 48105

Tel: +1-734-214-4297

Mobile: +1-734-546-8079

Fax: +1-734-214-4050

olechiw.michael@epa.gov

To: Grundler, Christopher[grundler.christopher@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 5:36:24 PM
Subject: RE: Question on comments to Detroit News

Responses sent.

From: Grundler, Christopher
Sent: Tuesday, September 22, 2015 1:21 PM
To: Birgfeld, Erin
Subject: Fwd: Question on comments to Detroit News

Christopher Grundler, Director

Office of Transportation and Air Quality

U.S. EPA

202-564-1682 (DC)

734-214-4207 (Ann Arbor)

Begin forwarded message:

From: "Jeff Plungis (BLOOMBERG/ NEWSROOM:)" <jplungis@bloomberg.net>
Date: September 22, 2015 at 1:16:36 PM EDT
To: <grundler.christopher@epa.gov>
Subject: Question on comments to Detroit News
Reply-To: Jeff Plungis <jplungis@bloomberg.net>

Chris:

I'm trying to confirm the on-the-record comments you made to the Detroit News yesterday, that EPA is expanding its review to include the Audi 3.0L V6 and Porsche Cayenne, which has the same engine. Both already were certified for 2016. And that the engines were certified before the agency knew the information about VW's defeat device.

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Jeff Plungis
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1399 New York Avenue, NW
Washington, DC 20005
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202/744-9768 (mobile)
jplungis@bloomberg.net
Twitter: @jplungis

To: john.cruden@usdoj.gov[john.cruden@usdoj.gov]; bruce.gelber@usdoj.gov[bruce.gelber@usdoj.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Ex. 6
Sent: Tue 9/22/2015 5:36:53 PM
Subject: Volkswagon's diesel vehicles

Dear John, Bruce and Phil:

I write as a colleague and friend, but particularly as a consumer. My wife and I own a 2012 VW Passat TDI, which we purchased largely because of its reputation for reliability, efficiency and outstanding fuel economy. We did so despite other excellent choices in cars, and despite the higher cost of diesel fuel, generally. You can imagine our dismay in learning that Volkswagon and its executives have admitted to the fact that software designed for their diesel engines was engineered to deliberately thwart emissions testing programs and produce a false record of compliance with Clean Air Act emissions requirements.

Although I recognize that the Clean Air Act under Section 202 does not provide for criminal sanctions (see 42 U.S.C. 7524), I am convinced that what VW has apparently admitted to is a violation of Title 18, U.S. consumer protection laws, and possibly U.S. import and export requirements for such companies. I urge you to take aggressive and appropriate criminal action against not only VW as a corporation, but against company executives who have perpetrated a fraud on citizens in this country and abroad. Attorney General Lynch's recent actions against FIFA for corporate corruption may provide an appropriate template for international action by the United States against VW executives.

Additionally, many states, such as Pennsylvania where I live, have emissions inspection programs for motor vehicles. "Clean diesel" vehicles in Pennsylvania are exempt from tailpipe inspections because, as I understand it, they meet CARB standards as low-emitting vehicles. Based upon what has been reported, however, VW's actions may violate Pennsylvania's Clean Vehicle Standards program as well, and many states' consumer protection and fraud laws. I would encourage the Justice Department and EPA to reach out to the states' attorneys general for discussions on possible joint actions against VW and its executives.

I appreciate your time in reading my letter. My best wishes to each of you.

Regards,

Ex. 6

From: Belser, Evan
Location: WJC-North 3428; or call in #: Non-Responsive
Importance: Normal
Subject: FW: Call with Peter Spencer, House Energy and Commerce Republican staffer re: VW
Start Date/Time: Tue 9/22/2015 6:00:00 PM
End Date/Time: Tue 9/22/2015 6:30:00 PM

Please attend as you are able in order to listen in. Rosemarie and I will talk for OECA. Thanks.

-----Original Appointment-----
From: Lewis, Josh
Sent: Tuesday, September 22, 2015 10:55 AM
To: Lewis, Josh; Wehrly, Linc; Cohen, Janet; Sutton, Tia; Kelley, Rosemarie; Belser, Evan; Emmerson, Caroline; Hengst, Benjamin
Cc: Haman, Patricia; Niebling, William
Subject: Call with Peter Spencer, House Energy and Commerce Republican staffer re: VW
When: Tuesday, September 22, 2015 2:00 PM-2:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: WJC-North 3428; or call in #: Non-Responsive

From: Lewis, Josh
Location: WJC-North 3428; or call in #: 1 866-299-3188; code Ex. 6
Importance: Normal
Subject: FW: Call with Peter Spencer, House Energy and Commerce Republican staffer re: VW
Start Date/Time: Tue 9/22/2015 6:00:00 PM
End Date/Time: Tue 9/22/2015 6:30:00 PM

Please attend as you are able in order to listen in. Rosemarie and I will talk for OECA. Thanks.

-----Original Appointment-----
From: Lewis, Josh
Sent: Tuesday, September 22, 2015 10:55 AM
To: Lewis, Josh; Wehrly, Linc; Cohen, Janet; Sutton, Tia; Kelley, Rosemarie; Belser, Evan; Emmerson, Caroline; Hengst, Benjamin
Cc: Haman, Patricia; Niebling, William
Subject: Call with Peter Spencer, House Energy and Commerce Republican staffer re: VW
When: Tuesday, September 22, 2015 2:00 PM-2:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: WJC-North 3428; or call in #: 1 866-299-3188; code Non-Responsive

To: Belser, Evan[Belser.Evan@epa.gov]; Shinkman, Susan[Shinkman.Susan@epa.gov]
Cc: Kaul, Meetu[Kaul.Meetu@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Kelley, Rosemarie
Sent: Tue 9/22/2015 5:37:03 PM
Subject: RE: Volkswagen TDI Recall Penalty Proposal

Susan—

Ex. 5

Rosemarie

From: Belser, Evan
Sent: Tuesday, September 22, 2015 6:39 AM
To: Shinkman, Susan
Cc: Kaul, Meetu; Kelley, Rosemarie; Werner, Jacqueline
Subject: Re: Volkswagen TDI Recall Penalty Proposal

Ex. 5

Evan Belser

Chief, Mobile Source Enforcement Branch

US EPA

On Sep 22, 2015, at 2:18 AM, Shinkman, Susan <Shinkman.Susan@epa.gov> wrote:

FYI. I assume someone is handling these centrally.

Thanks,Susan

Sent from my iPhone

Begin forwarded message:

From: Ex. 6
Date: September 22, 2015 at 1:22:57 AM GMT+2
To: <kelley.rosemarie@epa.gov>, <giles-aa.cynthia@epa.gov>, <starfield.lawrence@epa.gov>, <lee.charles@epa.gov>, <shinkman.susan@epa.gov>, <stewart.andrew@epa.gov>, <norris.tom@epa.gov>, <fisher.mike@epa.gov>
Cc: <kkiely@nrdc.org>, <Jerry.hirsch@latimes.com>
Subject: Volkswagen TDI Recall Penalty Proposal

Dear EPA,

Recently I became aware of the issue regarding Volkswagen having created an emissions defeat device on my 2009 Volkswagen TDI. If my car's emissions system is fixed under the recall, I will have a poorer performance and mileage profile; I won't get the originally claimed mileage and performance as one package. Additionally, the value of my car will decrease.

Rather than the EPA setting the fine of $35,000, I propose that the EPA negotiate to allow VW buy back vehicles from owners at MSRP (most TDI models are less than $35,000) and destroy them. This would likely take a greater portion of the gross polluting vehicles off of the road than the monetary fine because cars that don't go to the dealership will not receive a recall repair; those current owners would need this incentive to make the repair. This would also allow the original purchasers to purchase newer, cleaner vehicles.

Thank You,

Ex. 6

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: E&E Publishing
Sent: Tue 9/22/2015 5:39:54 PM
Subject: September 22 -- Greenwire is ready

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GREENWIRE — Tue., September 22, 2015

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Sage grouse decision draws cheers, legal threats

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20.CALIFORNIA:

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Water districts mull delta islands purchase

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22.COAL:

Northern Cheyenne votes against key railroad route

23.PEOPLE:

Former shell exec goes green

FEDERAL AGENCIES

24.EPA:

Agency's $334M in IT investments at risk -- IG

TRANSPORTATION

25.AIR POLLUTION:

Volkswagen ups number of cars affected by deception to 11M

26.ELECTRIC VEHICLES:

Apple revs up car project -- report

PUBLIC HEALTH

27.AIR POLLUTION:

Regs led to 76% drop in Calif. cancer risk -- study

STATES

28.NEVADA:

Sewage plant chief loses job but not because of EPA citation

29.NEW HAMPSHIRE:

Pair catches rogue emu with net after week on the lam

INTERNATIONAL

30.SYRIA:

Civil war prompts first withdrawal from seed vault

31.CHINA:

President's visit will hinge on clean tech

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To: Grundler, Christopher[grundler.christopher@epa.gov]
From: E&E Publishing
Sent: Tue 9/22/2015 5:45:47 PM
Subject: September 22 -- Greenwire is ready

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GREENWIRE — Tue., September 22, 2015

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Sage grouse decision draws cheers, legal threats

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Fruit fly infestation prompts Fla. crop quarantine

15.WILDLIFE:
Miley Cyrus blasts wolf cull

LAW

16.COAL:
Murray sues Bloomberg over financial reporting

17.CHEMICAL SAFETY:

Bayer to pay $5.6M over deadly 2008 W.Va. explosion

18.AGRICULTURE:

Peanut king gets record 28 years for salmonella outbreak

19.WATER POLLUTION:

Acid dump at maraschino factory leads to secret pot farm

DROUGHT

20.CALIFORNIA:

Turf rebate recipients may owe income tax -- water district

21.CALIFORNIA:

Water districts mull delta islands purchase

ENERGY

22.COAL:

Northern Cheyenne votes against key railroad route

23.PEOPLE:

Former shell exec goes green

FEDERAL AGENCIES

24.EPA:

Agency's $334M in IT investments at risk -- IG

TRANSPORTATION

25.AIR POLLUTION:

Volkswagen ups number of cars affected by deception to 11M

26.ELECTRIC VEHICLES:

Apple revs up car project -- report

PUBLIC HEALTH

27.AIR POLLUTION:

Regs led to 76% drop in Calif. cancer risk -- study

STATES

28.NEVADA:

Sewage plant chief loses job but not because of EPA citation

29.NEW HAMPSHIRE:

Pair catches rogue emu with net after week on the lam

INTERNATIONAL

30.SYRIA:

Civil war prompts first withdrawal from seed vault

31.CHINA:

President's visit will hinge on clean tech

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To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Ex. 7
Sent: Tue 9/22/2015 6:12:34 PM
Subject: RE: VW - trip to Ann Arbor this Friday

We are changing our DTW to DCA flight to 7:52 Friday night. We'd still like to start early on Friday. Thanks for the heads up.

Ex. 7

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

Ex. 7

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

From: Kaul, Meetu [mailto:Kaul.Meetu@epa.gov]
Sent: Tuesday, September 22, 2015 10:41 AM
To: Orehowsky, Gregory <Orehowsky.Gregory@epa.gov>; Ex. 7
Ex. 7
Ex. 7 @ENRD.USDOJ.GOV>
Cc: Belser, Evan <Belser.Evan@epa.gov>; Werner, Jacqueline <Werner.Jacqueline@epa.gov>
Subject: VW - trip to Ann Arbor this Friday

I received a voicemail from Linc. He is trying to coordinate with other DOJ enforcement for a coordinated visit for this Friday So lets get our travel in for that and I'll let you know more details as I have them.

FYI – I'll be offline for approx.. the next two hours.

Thanks,

mk

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

To: Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]
From: Kaul, Meetu
Sent: Tue 9/22/2015 6:13:15 PM
Subject: FW: VW - trip to Ann Arbor this Friday

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Engel, Bethany (ENRD) [mailto:Bethany.Engel@usdoj.gov]
Sent: Tuesday, September 22, 2015 2:13 PM
To: Kaul, Meetu
Subject: RE: VW - trip to Ann Arbor this Friday

We are changing our DTW to DCA flight to 7:52 Friday night. We'd still like to start early on Friday. Thanks for the heads up.

Bethany Engel

Trial Attorney

Environmental Enforcement Section

United States Department of Justice

PO Box 7611, Ben Franklin Station

Washington, DC 20044-7611

202.514.6892 (ph)

202.616.2427 (fax)

Overnight Deliveries

601 D Street NW, Room 6915

Washington, DC 20004

From: Kaul, Meetu [mailto:Kaul.Meetu@epa.gov]
Sent: Tuesday, September 22, 2015 10:41 AM
To: Orehowsky, Gregory <Orehowsky.Gregory@epa.gov>; Van Eaton, Josh (ENRD) <JVanEaton@ENRD.USDOJ.GOV>; Engel, Bethany (ENRD) <BEngel@ENRD.USDOJ.GOV>
Cc: Belser, Evan <Belser.Evan@epa.gov>; Werner, Jacqueline <Werner.Jacqueline@epa.gov>
Subject: VW - trip to Ann Arbor this Friday

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United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)

Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 6:18:00 PM
Subject: Anatomy of VW's deception: The recall that never fixed any cars
MAIL_CONVERSATION_TOPIC: Anatomy of VW's deception: The recall that never fixed any cars
Created: Fri 3/18/2016 6:18:18 PM

Volkswagen's decision to equip 11 million vehicles worldwide with devices to cheat emissions tests has sent the company into an acute corporate crisis...

View article...

From: MSN.com - Hotmail, Outlook, Skype, Bing, Latest News, Photos & Videos
Sent: Tue 9/22/2015 6:18:09 PM
Subject: Everything We Know About the Volkswagen Emissions Scandal
MAIL_CONVERSATION_TOPIC: Everything We Know About the Volkswagen Emissions Scandal
Created: Fri 3/18/2016 6:18:17 PM

Have you missed any part of the Volkswagen emissions scandal? Here's the saga thus far.

View article...

To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Grundler, Christopher[grundler.christopher@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]
From: Birgfeld, Erin
Sent: Tue 9/22/2015 6:18:51 PM
Subject: RE: (VW) NBC News re: explainer story about defeat devices

This is off camara.

Ex. 5

Thank you!

What exactly is the alleged defeat device? What does it do? How does it work?

VW installed software in the electronic control module (ECM) of these vehicles which sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During CARB and EPA testing, the vehicles ran software which produced compliant emission results under an ECM calibration referred to as the "dyno" calibration (referring to the equipment used in emissions testing, called a dynamometer). At all other times during actual vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road" calibration which reduced the function of the emission control system (specifically either the selective catalytic reduction or the lean NOx trap). As a result, emissions of nitrogen oxides increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle.

From: Bunker, Byron
Sent: Tuesday, September 22, 2015 2:00 PM

To: Birgfeld, Erin
Cc: Grundler, Christopher; Hengst, Benjamin
Subject: RE: (VW) NBC News re: explainer story about defeat devices

Ex. 5, 7

Ex. 5, 7

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Birgfeld, Erin
Sent: Tuesday, September 22, 2015 1:45 PM
To: Bunker, Byron
Cc: Grundler, Christopher; Hengst, Benjamin
Subject: FW: (VW) NBC News re: explainer story about defeat devices

Byron and Chris,

Ex. 5, 7

Thanks,

Erin

From: Valentine, Julia
Sent: Tuesday, September 22, 2015 1:41 PM
To: Millett, John; Birgfeld, Erin
Cc: Senn, John; Conger, Nick
Subject: (VW) NBC News re: explainer story about defeat devices

For OTAQ.

Nick and John S. FYI

From: Shah, Ritika (NBCUniversal) [mailto:Ritika.Shah@nbcuni.com]
Sent: Tuesday, September 22, 2015 1:28 PM
To: Valentine, Julia
Subject: Resources regarding VW emissions story

Hi Julia,

I was wondering if you could point me in the right direction regarding a representative or any other resource that could explain exactly how the "defeat device" installed in certain Volkswagen vehicles actually worked to evade EPA guidelines.

Trying to do an "explainer" story regarding this matter. Thanks!

Best,

Ritika

Ritika Shah

News Associate

ritika.shah@nbcuni.com

(201) 735-3208 *desk*

(201) 562-4820 *cell*

@ritikatshah

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
Cc: France, Jennifer[france.jennifer@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Mar, Peter (MOECC)
Sent: Tue 9/22/2015 6:26:05 PM
Subject: RE: VW Notice Of Violation

Thanks Bill,

I appreciate your response. I will contact Jennifer directly.

Peter Mar
Senior Program Advisor
Drive Clean Office
Ontario Ministry of the Environment and Climate Change
40 St. Clair Ave. West, 4th floor
Toronto, ON
M4V 1M2

peter.mar@ontario.ca
office 416 314 5894
fax 314-4160

From: Pidgeon, Bill [mailto:pidgeon.bill@epa.gov]
Sent: September-22-15 2:00 PM
To: Mar, Peter (MOECC)
Cc: France, Jennifer; Snyder, Jim
Subject: RE: VW Notice Of Violation

Hi Peter,

I received your call and the document I referred to as guidance for IM programs, may actually be a letter to the States. I haven't received any further information on the document.

The following link provides further information on the VW violations issue.

http://www3.epa.gov/otaq/cert/violations.htm

Also, we now have a single point of contact, who is Jennifer France, and may have more knowledge of the letter to the States and if it even exists. Jennifer's contact information is:

Phone: 734-214-4510

Email: France.jennifer@Epa.gov

Best wishes,

Bill

****

William M. Pidgeon
Mechanical Engineer
U.S. Environmental Protection Agency
Compliance Division, N69
2000 Traverwood Drive
Ann Arbor, MI 48105-2195
pidgeon.bill@epa.gov

Phone: 734-214-4416
Fax: 734-214-4869

From: Mar, Peter (MOECC) [mailto:Peter.Mar@ontario.ca]
Sent: Monday, September 21, 2015 10:56 AM
To: Pidgeon, Bill
Cc: Sosnowski, Dave; Snyder, Jim
Subject: RE: VW Notice Of Violation

Thanks Bill!

I look forward to the document on guidance for IM programs.

The material you are providing should be sufficient. I do not think I will need to speak to Jim.

Cheers,

Peter Mar
Senior Program Advisor
Drive Clean Office
Ontario Ministry of the Environment and Climate Change
40 St. Clair Ave. West, 4th floor
Toronto, ON
M4V 1M2

peter.mar@ontario.ca
office 416 314 5894
fax 314-4160

From: Pidgeon, Bill [mailto:pidgeon.bill@epa.gov]
Sent: September-21-15 10:52 AM
To: Mar, Peter (MOECC); Snyder, Jim
Cc: Sosnowski, Dave
Subject: VW Notice Of Violation

Hi Peter,

Please let me know that you received this email – I'll call you if I don't hear back, to correct your email address.

The document I read from is attached, and I will send you another document on guidance for IM programs, once it is released.

As we discussed, Jim Snyder is the EPA Compliance Engineer for VW, but please hold off calling him until tomorrow, as he is not sure of the extent of the information that is

approved for release. Jim's phone # is 734-214-4946.

Jim – Peter works for the Ministry of Environment for Ontario, and is interested in how their IM program can be tweaked to capture the VWs being recalled in the US. He is being called by politicians for more information. Peter's contact info is:

Phone: 416-314-5894

Email: Peter.Mar@ontario.ca

Best wishes,

Bill

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
From: Concur Travel
Sent: Tue 9/22/2015 6:37:25 PM
Subject: Concur Itinerary 09/24/2015: TRIP FROM WASHINGTON TO DETROIT (VT0QK6)
DCA-DTW.ics
DTW-DCA.ics
Hampton Inn Ann Arbor North.vcf

Trip Overview

Trip Name: Trip from Washington to Detroit
Start Date: September 24, 2015
End Date: September 25, 2015
Created: September 22, 2015, MEETU KAUL (Modified: September 22, 2015)
Description: Ex. 7 for VW case. Ex. 7
Ex. 7
Agency Record Locator: VT0QK6
Passengers: Meetu Kaul
Total Estimated Cost: **$461.20 USD**
Important: Reservations must be approved and ticketed no later than: 09/23/2015 9:55 PM Eastern
The trip will be automatically cancelled if it is not approved before the deadline.

Reservations

Thursday, September 24, 2015

Flight Washington, DC (DCA) to Detroit, MI (DTW)

Delta 858

Departure: 03:00 PM
Seat:No seat assignment
Ronald Reagan National Arpt (DCA)
Arrival: 04:39 PM
Detroit Wayne County Arpt (DTW)

Confirmation: F7WQ6W
Status: **Confirmed**

Additional Details

Distance: 404 miles

Emissions: 173.7 lbs CO_2

Cabin: Economy (L)

Hampton Inn Ann Arbor North

2300 Green Rd

Checking In: Thu Sep 24
Room 1, Days 1, Guests 1
Checking Out: Fri Sep 25

Confirmation: 84635315
Status:**Confirmed**
Rate Code:A0FA3O

Additional Information

Daily Rate: **$**105.00 **USD**

Total Rate: **$**105.00 **USD**

Room Details

Room Description: RoomDescriptionCodeA0FA3O

Special Instructions: Nonsmoking

Friday, September 25, 2015

Flight Detroit, MI (DTW) to Washington, DC (DCA)

Delta 1220

Departure: 07:52 PM
Seat:No seat assignment
Detroit Wayne County Arpt (DTW)
Arrival: 09:29 PM
Ronald Reagan National Arpt (DCA)

Confirmation: F7WQ6W
Status: **Confirmed**

Additional Details

Distance: 404 miles

Emissions: 173.7 lbs CO_2

Cabin: Economy (L)

Total Estimated Cost

Air	
Airfare quoted amount:	**$305.12 USD**
Taxes and fees:	**$51.08 USD**
Air Total Price:	**$356.20 USD**
Hotel:	**$105.00 USD**
Total Estimated Cost:	**$461.20 USD**

TICKET NOT YET ISSUED. AIRFARE QUOTED IN ITINERARY IS NOT GUARANTEED UNTIL

TICKETS ARE ISSUED.

Remarks

FOR 24/7 TRAVEL ASSISTANCE PLEASE CONTACT
THE BCD TRAVEL TEAM AT 1-866-964-1346
FOR OUTSIDE THE US CALL COLLECT 406-496-9577
FOR THE HEARING IMPAIRED- PLEASE DIAL 711
TO ACCESS RELAY SERVICE- PROVIDE PHONE
NUMBER OF 1-866-964-1346 TO ACCESS TRAVEL
****
DUE TO RECENT CHANGES IN THE FY15 GOVERNMENT CITY PAIR
PROGRAM/CPP YOUR AIR RESERVATIONS ARE SUBJECT TO
CANCELLATION BY THE AIRLINES IF NOT TICKETED AT LEAST
48 HOURS PRIOR TO SCHEDULED DEPARTURE
PLEASE ENSURE ALL NECESSARY APPROVALS ARE PROCESSED IN
ACCORDANCE WITH YOUR AGENCYS BUSINESS RULES BUT NOLESS
THAN 3 BUSINESS DAYS PRIOR TO DEPARTURE TO ENSURE TICKETING.
THIS 48 HOUR CANCELLATION RULE DOES NOT APPLY TO
INTERNATIONAL RESERVATIONS UNLESS YOUR TRIP HAS DOMESTIC
CONNECTIONS ON MORE THAN ONE AIRLINE OR THESE
RESERVATIONS REQUIRE SEPARATE AIR TICKETS.
****

Flight# DL858 from DCA -> DTW
(1 hour and 39 mi ns.)

20150924T190000Z

Version
2.0

METHOD
PUBLISH

Start Date/Time
20150924T190000Z

End Date/Time
20150924T203900Z

DTSTAMP
20150924T190000Z

Location

Summary
Flight# DL858 from DCA -> DTW
(1 hour and 39 mi ns.)

Description
Trip Overview
~~~~~~~~~~~~~~

Trip Name: Trip fr om Washington to Detroit
Start Date: September 2 4, 2015
End Date: September 25, 2015
Created: September 22, 2015, MEETU KAUL (Modified: Septembe r 22, 2015)
Description: Ex. 7 f or VW case. Ex. 7
Ex. 7
Agency Record Locator: VT0QK6
Passengers: Meetu Kaul
Total Estimated Cost: $ 461.20 USD
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Reservations
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Thursday, Septe mber 24, 2015

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``` ``

D elta 858
```

Departure: 03:00 PM
Seat: No seat as signment
Ronald Reagan National Arpt (DCA)
Arri val: 04:39 PM
Detroit Wayne County Arpt (DTW)
Co nfirmation: F7WQ6W
Status: Confirmed
Distance: 404 miles
Emissions: 173.7 lbs CO 2
Cabin : Economy (L)

Hampton Inn Ann Arbor North
` ``````````````````````````

2300 Green Rd
Ann Arbor, Michigan, 48105
US
734-996-4444

Chec king In: Thu Sep 24
Room 1, Days 1, Guests 1 \nChecking Out: Fri Sep 25
Confirmation: 8463531 5
Status: Confirmed
Rate Code: A0FA3O
Daily R ate: $ 105.00 USD
Total Rate: $ 105.00 USD
Roo m Details
Room Description: RoomDescriptionCo deA0FA3O
Special Instructions: Nonsmoking \n
Friday, September 25, 2015
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Flight Detroit, MI (DTW) to Washington, DC (DCA)
`````````````````````````````````````` ````````

Delta 1220

Departure: 07:52 PM
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****

UID
VT0QK6-2015-09-24T19:00:00.000Z-2015-09-24T20:39:00.000Z@concursolutions.com

Priority
3

Time Transparency
OPAQUE

TRIGGER
-PT180M

REPEAT
2

DURATION
PT60M

ACTION
DISPLAY

Description
3 Hours to your flight DCA -> DTW
~~~~~~~

Flight# DL1220 from DTW -> DCA
(1 hour and 37 m ins.)

20150925T235200Z

Version
2.0

METHOD
PUBLISH

Start Date/Time
20150925T235200Z

End Date/Time
20150926T012900Z

DTSTAMP
20150925T235200Z

Location

Summary
Flight# DL1220 from DTW -> DCA
(1 hour and 37 m ins.)

Description
Trip Overview
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Trip Name: Trip fr om Washington to Detroit
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Thursday, Septe mber 24, 2015

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D elta 858
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Emissions: 173.7 lbs CO 2
Cabin : Economy (L)

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2300 Green Rd
Ann Arbor, Michigan, 48105
US
734-996-4444

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THE BCD TRAVEL TEAM AT 1-866-9 64-1346
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PLEASE ENSURE ALL NECE SSARY APPROVALS ARE PROCESSED IN
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RESERVATIONS REQUIRE SEPARATE AIR TIC KETS.
****

UID
VT0QK6-2015-09-25T23:52:00.000Z-2015-09-26T01:29:00.000Z@concursolutions.com

Priority
3

Time Transparency
OPAQUE

TRIGGER
-PT180M

REPEAT
2

DURATION
PT60M

ACTION
DISPLAY

Description
3 Hours to your flight DTW -> DCA
~~~~~~~

Hampton Inn Ann Arbor North

2300 Green Rd,;Ann Arbor;Michigan;48105;US

734-996-4444 (Work Voice)
734-996-0196 (Work Fax)

Version
2.1

Organization
Hampton Inn Ann Arbor North

Telephone Number (Work Voice)
734-996-4444

Telephone Number (Work Fax)
734-996-0196

Address (Work)
P.O. Address:
Extended Address:
Street: 2300 Green Rd,
Locality: Ann Arbor
Region: Michigan
Postal Code: 48105
Country: US

Delivery Label (Work)
2300 Green Rd,;Ann Arbor;Michigan;48105;US

Comment
Checkin Time: 15:00
Checkout Time: 12:00

Directions to Hotel:
- Additional Directions The Hampton Inn Hotel In Ann Arbor North Is Easily Accessible Via The Easy Directions Below From Metro Airport Take I-94 West And Merge Onto Us-23 North At Exit 180b. From Us-23 Take Exit 41 Plymouth Road. Turn Left Onto Plymouth Road And Turn Right Onto Green Road At The Traffic Light.

Last Revision
9/22/2015 2:37:25 PM

To: Birgfeld, Erin[Birgfeld.Erin@epa.gov]
From: Bunker, Byron
Sent: Tue 9/22/2015 6:39:47 PM
Subject: RE: (VW) Diesel Review, re: VW NOx Test

Definitely an ICCT / WVU question. I think they just wanted representative vehicles.

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: (734) 353-9623

****

From: Birgfeld, Erin
Sent: Tuesday, September 22, 2015 2:39 PM
To: Bunker, Byron
Subject: FW: (VW) Diesel Review, re: VW NOx Test

Hi Bryon,

I think we should not get into this. Also the question seems odd to me. Is this something related to the WV/ ICCT study?

Can we send them there?

Thanks!

-Erin

From: Valentine, Julia
Sent: Tuesday, September 22, 2015 2:08 PM
To: Birgfeld, Erin; Millett, John
Subject: (VW) Diesel Review, re: VW NOx Test

Bryan Grant

Diesel Review

Julia P. Valentine

Office of Public Affairs

U.S. EPA

202.564.2663 direct

202.740.1336 m/txt

From: Bryan Grant [mailto:bgrant@noshmail.com]
Sent: Tuesday, September 22, 2015 2:07 PM
To: Valentine, Julia
Subject: VW NOx Test

Quick question:

Why were 4-cylinder VW TDI models compared to the BMW X5 V6 diesel? Was this due to availabiliy? BMW has a 4-cylinder diesel in their 328d and Mercedes has a 4-cylinder diesel in their E250.

Also, the Audi A6 TDI has a V6 diesel similar to the BMW X5 diesel.

It just strikes me as an odd comparison and control group.

Thanks,

Bryan Grant

Diesel Review

To: Dalton, Joel[Dalton.Joel@epa.gov]
From: Non-Responsive
Sent: Tue 9/22/2015 7:21:32 PM
Subject: Non-Responsive

Non-Responsive

Hi Joel,

Non-Responsive

haven't heard back from Dave yet so I just forwarded the request to Bob. I am guessing that everyone may be caught up with the VW mess.

Non-Responsive

Thanks,

Brad

From: Non-Responsive
Sent: Tuesday, September 22, 2015 3:16 PM
To: Peavyhouse.Robert@epamail.epa.gov
Subject: **Non-Responsive**

Hi Bob,

Non-Responsive

From: Non-Responsive
Sent: Monday, September 21, 2015 11:10 PM
To: Good, David (good.david@epa.gov)
Subject: Non-Responsive

Hi Dave,

Non-Responsive

To: Kaul, Meetu[Kaul.Meetu@epa.gov]
Cc: McCray, Deborah[Mccray.Deborah@epa.gov]; Orehowsky, Gregory[Orehowsky.Gregory@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]
From: Chapman, Apple
Sent: Tue 9/22/2015 7:29:12 PM
Subject: RE: Travel requiring authorization ASAP for trip to Ann Arbor this Friday

I approved the two that were in the system.

Ms. Apple Chapman

Associate Director, Air Enforcement Division

U.S. Environmental Protection Agency

1200 Pennsylvania Ave. NW, Washington DC, 20004

202-564-5666 (office)

202-841-6076 (cell)

From: Kaul, Meetu
Sent: Tuesday, September 22, 2015 3:07 PM
To: Chapman, Apple
Cc: McCray, Deborah; Orehowsky, Gregory; Belser, Evan; Werner, Jacqueline
Subject: Travel requiring authorization ASAP for trip to Ann Arbor this Friday
Importance: High

Apple and Debbie,

Greg Orehowsky and I are traveling to Ann Arbor this Thursday afternoon. I've just put in my travel and Greg is working on getting his finalized. We need these approved ASAP.

We will be following up on these TAs with another trip scheduled for early October to go to El Monte, California. Just a heads up that that travel request is coming today as well and will need approval.

Per Jacqueline's email below, she asked that you approve this travel since she is on leave, and also asked that we let Debbie McCray know that this travel will need to be approved ASAP.

Thanks!

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

From: Werner, Jacqueline
Sent: Tuesday, September 22, 2015 11:26 AM
To: Orehowsky, Gregory
Cc: Kaul, Meetu; Van Eaton, Josh (ENRD); Engel, Bethany (ENRD); Belser, Evan
Subject: Re: VW - trip to Ann Arbor this Friday

I'm not going to have access to concur so you are going to have to ask Apple to approve your travel. Also, please contact Debbie McCray and give her a heads up that this is coming and needs approval ASAP.

Thanks,

jj

Sent from my iPhone

Jacqueline Robles Werner

Associate Director

Air Enforcement Division

W: 202-564-1036

On Sep 22, 2015, at 10:55 AM, Orehowsky, Gregory <Orehowsky.Gregory@epa.gov> wrote:

> Meetu:
>
> When you get back online, lets coordinate when you want to leave/return, rental car, place to stay Thursday night. The Hampton Inn down the street from NVFEL would be fine with me.
>
> Greg Orehowsky
>
> U.S. EPA
>
> Office of Civil Enforcement
>
> Air Enforcement Division
>
> Phone 202-343-9292
>
> **From:** Kaul, Meetu
> **Sent:** Tuesday, September 22, 2015 10:41 AM
> **To:** Orehowsky, Gregory; Van Eaton, Josh (ENRD); Engel, Bethany (ENRD)
> **Cc:** Belser, Evan; Werner, Jacqueline
> **Subject:** VW - trip to Ann Arbor this Friday
>
> I received a voicemail from Linc. He is trying to coordinate with other DOJ enforcement for a coordinated visit for this Friday. So lets get our travel in for that and I'll let you know

more details as I have them.

FYI – I'll be offline for approx.. the next two hours.

Thanks,

mk

Ms.Meetu Kaul, Attorney-Advisor

United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
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